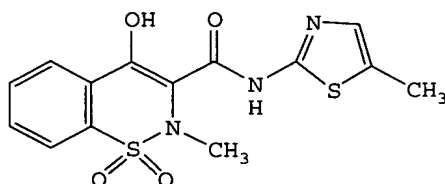


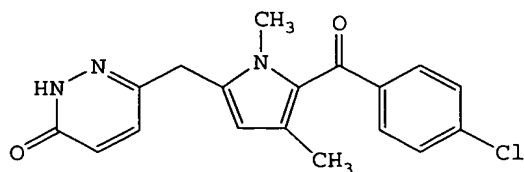
What is claimed is:

1. A composition comprising an anti-human immunodeficiency virus agent and a cyclooxygenase-2 selective inhibitor or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.
2. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises a chromene compound.
3. The composition of claim 2 wherein the chromene compound is a benzopyran or substituted benzopyran analog.
4. The composition of claim 3 wherein the benzopyran or substituted benzopyran analog is selected from the group consisting of benzothiopyrans, dihydroquinolines and dihydronaphthalenes.
5. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises a tricyclic compound.
6. The composition of claim 5 wherein the tricyclic compound comprises a benzenesulfonamide or methylsulfonylbenzene.
7. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises a phenyl acetic acid derivative.
8. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises:



or pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

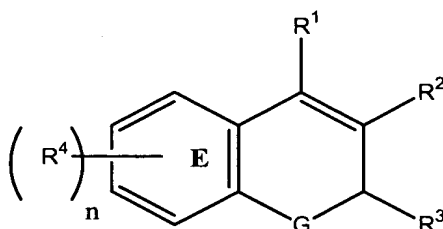
9. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises:



or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

5

10. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



10

wherein:

n is an integer which is 0, 1, 2, 3 or 4;

G is O, S or NR^a;

R^a is alkyl;

R¹ is selected from the group consisting of H and aryl;

15

R² is selected from the group consisting of carboxyl, aminocarbonyl, alkylsulfonylaminocarbonyl and alkoxy carbonyl;

R³ is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl and aryl optionally substituted with one or more radicals selected from alkylthio, nitro and alkylsulfonyl; and

20

each R⁴ is independently selected from the group consisting of H, halo, alkyl, aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy, haloalkyl, haloalkoxy, alkylamino, arylamino, aralkylamino, heteroaryl amino, heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl, arylaminosulfonyl, heteroarylaminosulfonyl, aralkylaminosulfonyl, heteroaralkylaminosulfonyl, heterocyclosulfonyl, alkylsulfonyl, hydroxyarylcarbonyl,

25

nitroaryl, optionally substituted aryl, optionally substituted heteroaryl,
 aralkylcarbonyl, heteroarylcarbonyl, arylcarbonyl, aminocarbonyl, and alkylcarbonyl;
 and

5 R^4 together with the carbon atoms to which it is attached and the remainder of
 ring E forms a naphthyl radical.

11. The composition of claim 10, wherein:

n is an integer which is 0, 1, 2, 3 or 4;

G is O, S or NR^b ;

10 R^1 is H;

R^b is alkyl;

R^2 is selected from the group consisting of carboxyl, aminocarbonyl,
 alkylsulfonylaminocarbonyl and alkoxycarbonyl;

15 R^3 is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl
 and aryl, wherein haloalkyl, alkyl, aralkyl, cycloalkyl, and aryl each is independently
 optionally substituted with one or more radicals selected from the group consisting of
 alkylthio, nitro and alkylsulfonyl; and

each R^4 is independently selected from the group consisting of hydrido, halo,
 alkyl, aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy,
 20 haloalkyl, haloalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino,
 heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl,
 arylaminosulfonyl, heteroarylaminosulfonyl, aralkylaminosulfonyl,
 heteroaralkylaminosulfonyl, heterocyclosulfonyl, alkylsulfonyl, optionally substituted
 aryl, optionally substituted heteroaryl, aralkylcarbonyl, heteroarylcarbonyl,
 25 arylcarbonyl, aminocarbonyl, and alkylcarbonyl; or wherein R^4 together with ring E
 forms a naphthyl radical.

12. The composition of claim 10, wherein:

n is an integer which is 0, 1, 2, 3 or 4;

30 G is oxygen or sulfur;

R^1 is H;

R^2 is carboxyl, lower alkyl, lower aralkyl or lower alkoxycarbonyl;

R^3 is lower haloalkyl, lower cycloalkyl or phenyl; and

each R⁴ is H, halo, lower alkyl, lower alkoxy, lower haloalkyl, lower haloalkoxy, lower alkylamino, nitro, amino, aminosulfonyl, lower alkylaminosulfonyl, 5-membered heteroarylalkylaminosulfonyl, 6-membered heteroarylalkylaminosulfonyl, lower aralkylaminosulfonyl, 5-membered nitrogen-containing heterocyclosulfonyl, 6-membered-nitrogen containing heterocyclosulfonyl, lower alkylsulfonyl, optionally substituted phenyl, lower aralkylcarbonyl, or lower alkylcarbonyl; or

wherein R⁴ together with the carbon atoms to which it is attached and the remainder of ring E forms a naphthyl radical.

10

13. The composition of claim 10, wherein:

R² is carboxyl;

R³ is lower haloalkyl; and

each R⁴ is H, halo, lower alkyl, lower haloalkyl, lower haloalkoxy, lower alkylamino, amino, aminosulfonyl, lower alkylaminosulfonyl, 5-membered heteroarylalkylaminosulfonyl, 6-membered heteroarylalkylaminosulfonyl, lower aralkylaminosulfonyl, lower alkylsulfonyl, 6-membered nitrogen-containing heterocyclosulfonyl, optionally substituted phenyl, lower aralkylcarbonyl, or lower alkylcarbonyl; or wherein R⁴ together with ring E forms a naphthyl radical.

20

14. The composition of claim 10, wherein:

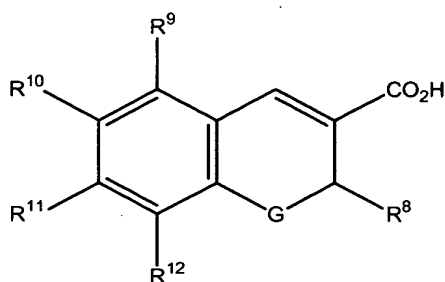
n is an integer which is 0, 1, 2, 3 or 4;

R³ is fluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, pentafluoroethyl, heptafluoropropyl, difluoroethyl, difluoropropyl, dichloroethyl, dichloropropyl, difluoromethyl, or trifluoromethyl; and

each R⁴ is H, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, butyl, isobutyl, pentyl, hexyl, methoxy, ethoxy, isopropoxy, *tert*butyloxy, trifluoromethyl, difluoromethyl, trifluoromethoxy, amino, N,N-dimethylamino, N,N-diethylamino, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, nitro, N,N-dimethylaminosulfonyl, aminosulfonyl, N-methylaminosulfonyl, N-ethylsulfonyl, 2,2-dimethylethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-(2-methylpropyl)aminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, 2,2-dimethylpropylcarbonyl, phenylacetyl or phenyl;

or wherein R⁴ together with the carbon atoms to which it is attached and the remainder of ring E forms a naphthyl radical.

15. The composition of claim 10 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



G is oxygen or sulfur;

R⁸ is trifluoromethyl or pentafluoroethyl;

R⁹ is H, chloro, or fluoro;

- 10 R¹⁰ is H, chloro, bromo, fluoro, iodo, methyl, tert-butyl, trifluoromethoxy, methoxy, benzylcarbonyl, dimethylaminosulfonyl, isopropylaminosulfonyl, methylaminosulfonyl, benzylaminosulfonyl, phenylethylaminosulfonyl, methylpropylaminosulfonyl, methylsulfonyl, or morpholinosulfonyl;

- 15 R¹¹ is H, methyl, ethyl, isopropyl, tert-butyl, chloro, methoxy, diethylamino, or phenyl; and

R¹² is H, chloro, bromo, fluoro, methyl, ethyl, tert-butyl, methoxy, or phenyl.

16. The composition of claim 10 wherein the cyclooxygenase-2 selective inhibitor, pharmaceutically acceptable salt, isomer or prodrug thereof is selected from the group consisting of:

- 6-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-7-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 25 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 2-trifluoromethyl-3H-naphthopyran-3-carboxylic acid ;
 7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;

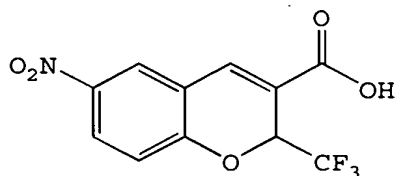
- 6-bromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 5,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 5 8-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 7,8-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6,8-bis(dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 7-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 10 6-chloro-7-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-8-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6,8-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 15 2-trifluoromethyl-3H-naptho[2,1-b]pyran-3-carboxylic acid;
 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-chloro-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-chloro-6-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-bromo-8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 20 8-bromo-6-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-bromo-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-bromo-5-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-8-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-bromo-8-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 25 6-[[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
 acid;
 6-[(dimethylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[(methylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[(4-morpholino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 30 6-[(1,1-dimethylethyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
 carboxylic acid;
 6-[(2-methylpropyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
 acid;
 6-methylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;

- 8-chloro-6-[[[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6-phenylacetyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6,8-dibromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 5 8-chloro-5,6-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6,8-dichloro-(*S*)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6-benzylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6-[[N-(2-furylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 10 6-[[N-(2-phenylethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6-iodo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 7-(1,1-dimethylethyl)-2-pentafluoroethyl-2H-1-benzopyran-3-carboxylic acid; and
- 6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

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17. The composition of claim 10 wherein the cyclooxygenase-2 selective inhibitor, pharmaceutically acceptable salt or prodrug thereof is selected from the group consisting of formulas:

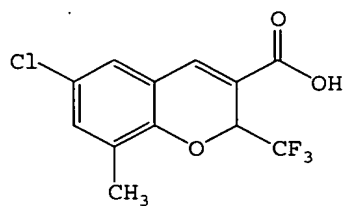
a)



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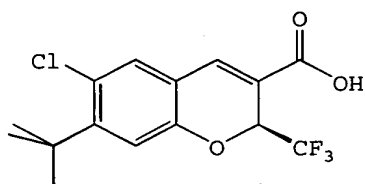
6-Nitro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid ;

b)



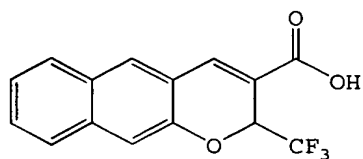
6-Chloro-8-methyl-2-trifluoromethyl
-2H-1-benzopyran-3-carboxylic acid ;

5 c)



((S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluo
romethyl-2H-1-benzopyran-3-carboxylic acid ;

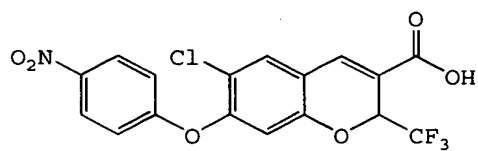
d)



2-Trifluoromethyl-2H-naphtho[2,3-b]
pyran-3-carboxylic acid ;

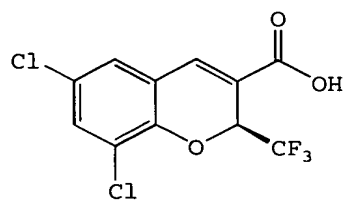
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e)



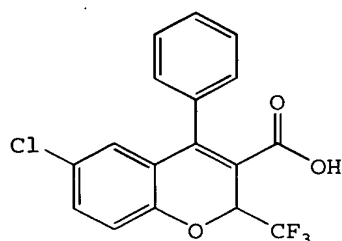
6-Chloro-7-(4-nitrophenoxy)-2-(trifluoromethyl)-2H-1-
benzopyran-3-carboxylic acid ;

f)



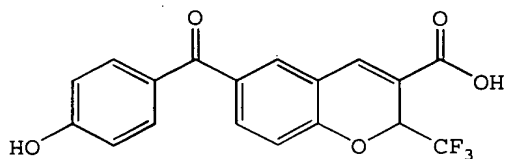
((S)-6,8-Dichloro-2-(trifluoromethyl)-
2H-1-benzopyran-3-carboxylic acid ;

g)



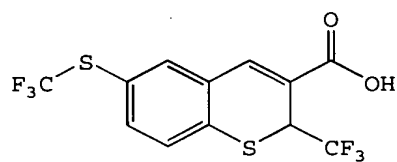
5 6-Chloro-2-(trifluoromethyl)-4-phenyl-2H-
1-benzopyran-3-carboxylic acid ;

h)



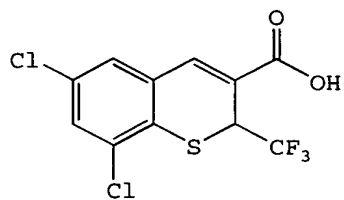
6-(4-Hydroxybenzoyl)-2-(trifluoromethyl)-
2H-1-benzopyran-3-carboxylic acid ;

10 i)



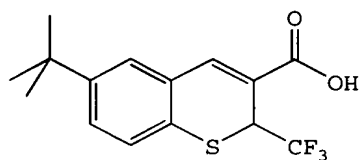
2-(Trifluoromethyl)-6-[(trifluoromethyl)thio]-
2H-1-benzothiopyran-3-carboxylic acid ;

j)



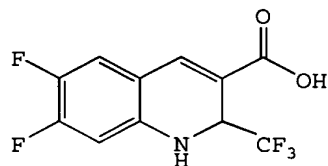
6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic acid ;

k)



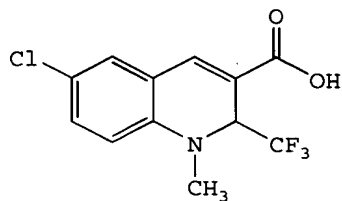
5 6-(1,1-Dimethylethyl)-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic acid ;

l)



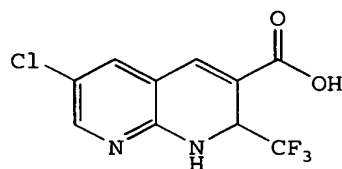
6,7-Difluoro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

10 m)



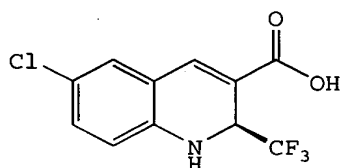
6-Chloro-1,2-dihydro-1-methyl-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

n)



6-Chloro-2-(trifluoromethyl)-1,2-dihydro
[1,8]naphthyridine-3-carboxylic acid ;

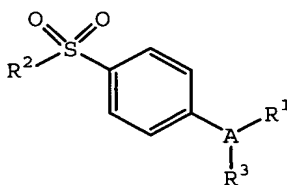
o)



5 ((S)-6-Chloro-1,2-dihydro-2-(trifluoro
methyl)-3-quinolinecarboxylic acid ;

and any combination thereof.

18. The composition of claim 1 wherein the cyclooxygenase inhibitor
comprises a compound of the formula or a pharmaceutically acceptable salt or
10 prodrug thereof



wherein:

15 A is selected from the group consisting of partially unsaturated or
unsaturated heterocyclyl and partially unsaturated or unsaturated carbocyclic
rings;

R¹ is selected from the group consisting of heterocyclyl, cycloalkyl,
cycloalkenyl and aryl, wherein R¹ is optionally substituted at a substitutable
20 position with one or more radicals selected from alkyl, haloalkyl, cyano,
carboxyl, alkoxycarbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino,

alkylamino, arylamino, nitro, alkoxyalkyl, alkylsulfinyl, halo, alkoxy and alkylthio;

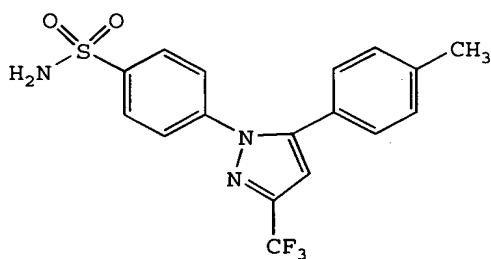
R² is selected from the group consisting of methyl or amino; and

R³ is selected from the group consisting of a radical selected from H,

- 5 halo, alkyl, alkenyl, alkynyl, oxo, cyano, carboxyl, cyanoalkyl, heterocycloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, aryl, haloalkyl, heterocyclyl, cycloalkenyl, aralkyl, heterocyclalkyl, acyl, alkylthioalkyl, hydroxyalkyl, alkoxycarbonyl, arylcarbonyl, aralkylcarbonyl, aralkenyl, alkoxyalkyl, arylthioalkyl, aryloxyalkyl, aralkylthioalkyl, aralkoxyalkyl, alkoxyaralkoxyalkyl, alkoxycarbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N- arylaminocarbonyl, N-alkyl-N- arylaminocarbonyl, alkylaminocarbonylalkyl, carboxyalkyl, alkylamino, N- arylamino, N-aralkylamino, N-alkyl-N-aralkylamino, N-alkyl-N-arylmino, aminoalkyl, alkylaminoalkyl, N-arylaminioalkyl, N-aralkylaminioalkyl, N- alkyl-N-aralkylaminioalkyl, N-alkyl-N-arylaminioalkyl, aryloxy, aralkoxy, arylthio, aralkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl, alkylaminosulfonyl, N-arylaminosulfonyl, arylsulfonyl, N-alkyl-N- arylaminosulfonyl.
- 10
- 15

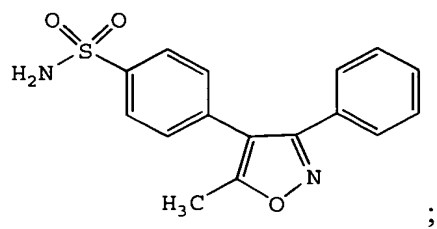
- 20 19. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor pharmaceutically acceptable salt or prodrug thereof is selected from the group consisting of:

a)

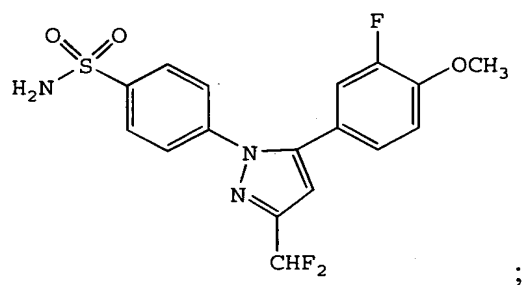


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b)

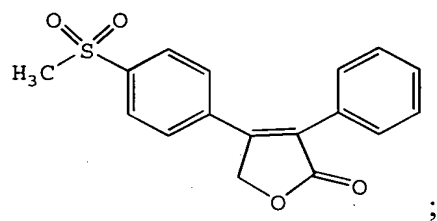


c)



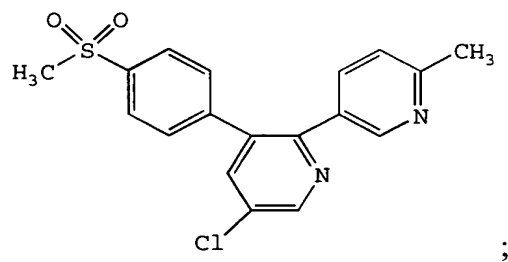
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d)

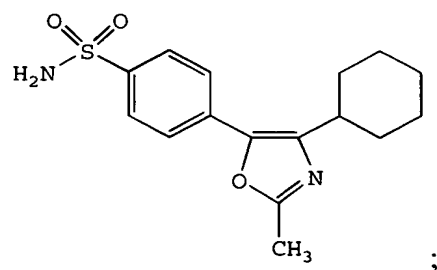


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e)



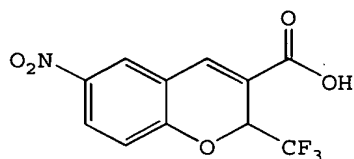
f)



and any combination thereof.

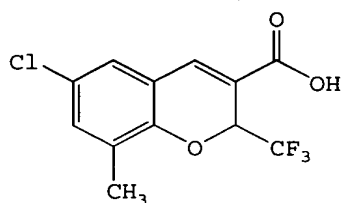
20. The composition of claim 1 wherein the cyclooxygenase-2 selective
 5 inhibitor or a pharmaceutically acceptable salt or prodrug thereof is selected from the group consisting of:

a)



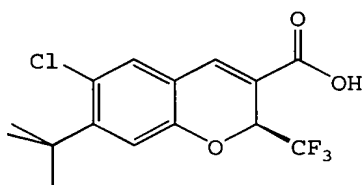
6-Nitro-2-trifluoromethyl-2H-1-
 -benzopyran-3-carboxylic acid ;

10 b)



6-Chloro-8-methyl-2-trifluoromethyl
 -2H-1-benzopyran-3-carboxylic acid ;

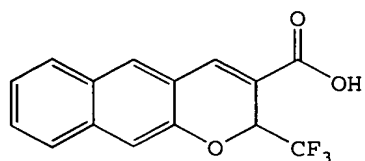
c)



((S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluo
 romethyl-2H-1-benzopyran-3-carboxylic acid ;

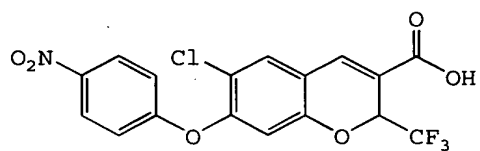
15

d)



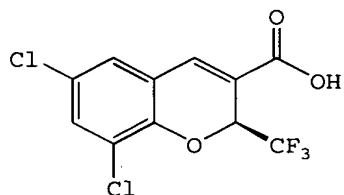
2-Trifluoromethyl-2H-naphtho[2,3-b]
pyran-3-carboxylic acid ;

e)



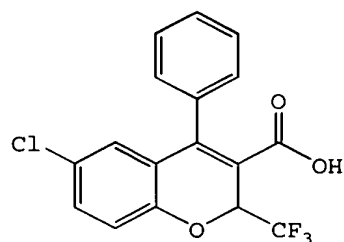
5 6-Chloro-7-(4-nitrophenoxy)-2-(trifluoromethyl)-2H-1-
benzopyran-3-carboxylic acid ;

f)



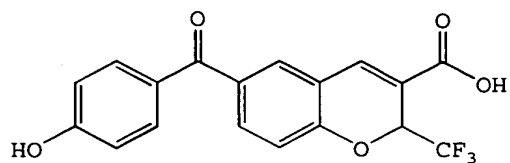
((S)-6,8-Dichloro-2-(trifluoromethyl)-
2H-1-benzopyran-3-carboxylic acid ;

g)



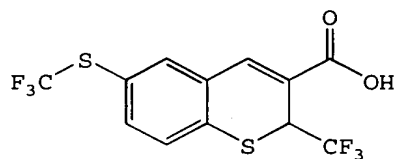
10 6-Chloro-2-(trifluoromethyl)-4-phenyl-2H-
1-benzopyran-3-carboxylic acid ;

h)



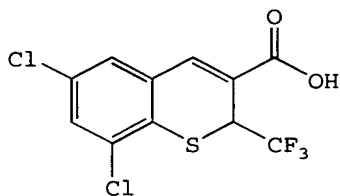
6-(4-Hydroxybenzoyl)-2-(trifluoromethyl)-
-2H-1-benzopyran-3-carboxylic acid ;

i)



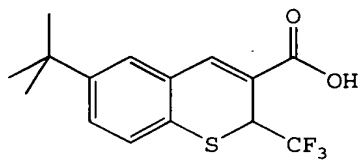
5 2-(Trifluoromethyl)-6-[(trifluoromethyl)thio]-
-2H-1-benzothiopyran-3-carboxylic acid ;

j)



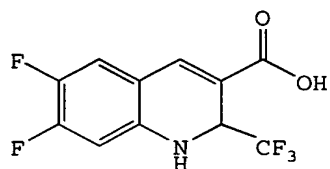
10 6,8-Dichloro-2-trifluoromethyl-2H-1-
benzothiopyran-3-carboxylic acid ;

k)



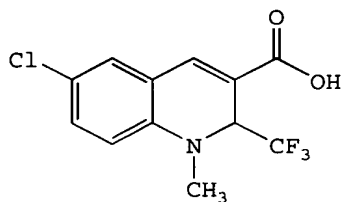
6-(1,1-Dimethylethyl)-2-(trifluoromethyl)-
-2H-1-benzothiopyran-3-carboxylic acid ;

l)



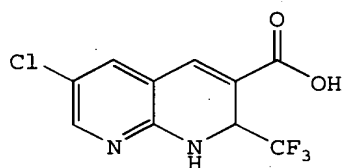
6,7-Difluoro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

m)



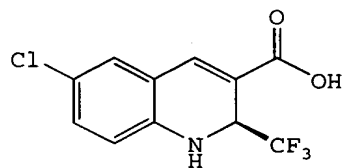
5 6-Chloro-1,2-dihydro-1-methyl-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

n)



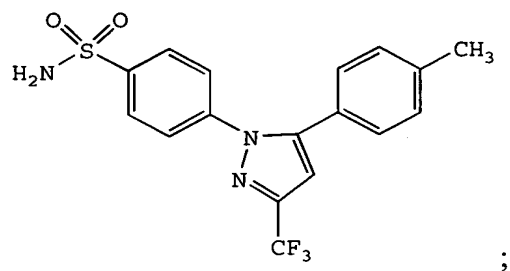
6-Chloro-2-(trifluoromethyl)-1,2-dihydro[1,8]naphthyridine-3-carboxylic acid ;

10 o)

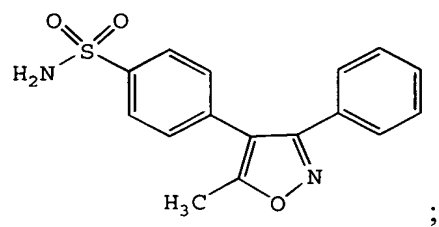


((S)-6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

p)

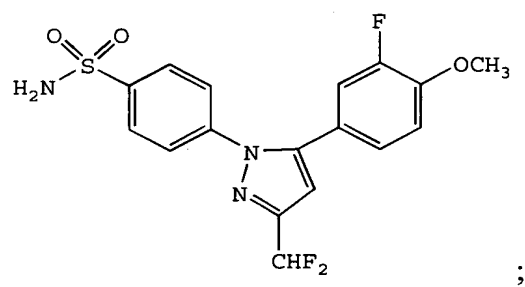


q)

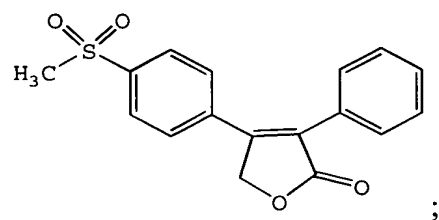


5

r)

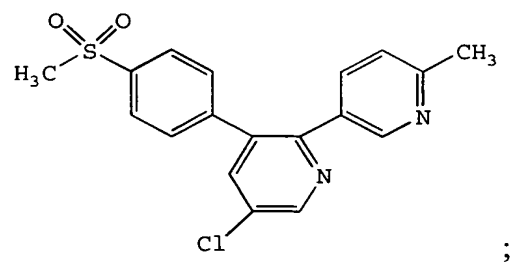


s)

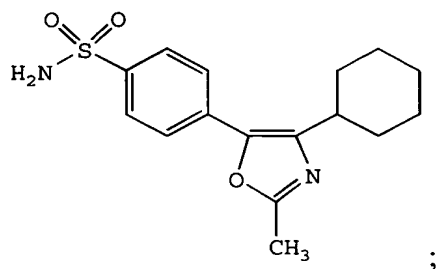


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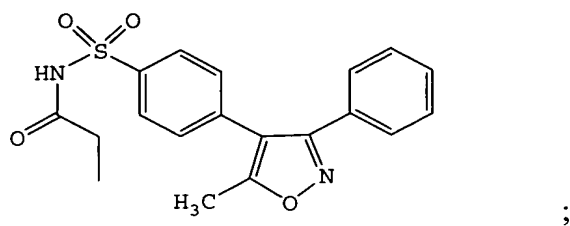
t)



u)

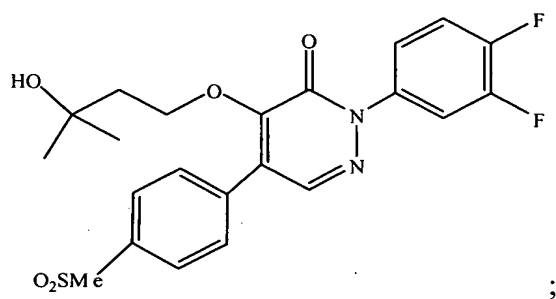


v)



5

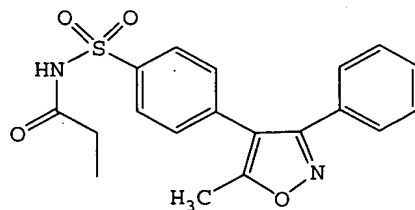
w)



and any combination thereof.

10

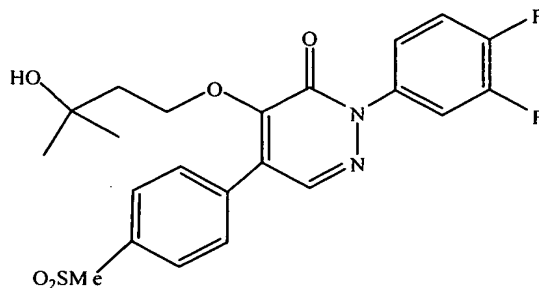
21. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises:



or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

15

22. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises:



or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

23. The composition of claim 1 wherein the cyclooxygenase-2 selective
5 inhibitor comprises 4-[4-(methyl)-sulfonyl]phenyl]-3-phenyl-2(5H)-furanone, or a
pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

24. The composition of claim 1 wherein the cyclooxygenase-2 selective
10 inhibitor comprises 4-(5-methyl-3-phenyl-4-isoxazolyl), or a pharmaceutically
acceptable salt, ester, isomer or prodrug thereof.

25. The composition of claim 1 wherein the cyclooxygenase-2 selective
inhibitor comprises 2-(6-methylpyrid-3-yl)-3-(4-methylsulfonylphenyl)-5-
15 chloropyridine, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

26. The composition of claim 1 wherein the cyclooxygenase-2 selective
inhibitor comprises 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl], or a
pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

20 27. The composition of claim 1 wherein the cyclooxygenase-2 selective
inhibitor comprises N-[[4-(5-methyl-3-phenyl-4-isoxazolyl)phenyl]sulfonyl], or a
pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

28. The composition of claim 1 wherein the cyclooxygenase-2 selective
25 inhibitor comprises 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl)-1H-pyrazol-
1-yl]benzenesulfonamide, or a pharmaceutically acceptable salt, ester, isomer or
prodrug thereof.

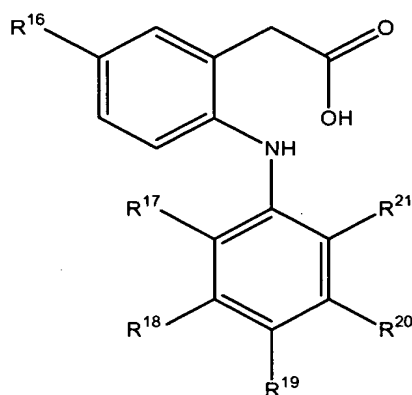
29. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises (S)-6,8-dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

5

30. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises 2-(3,4-difluorophenyl)-4-(3-hydroxy-3-methylbutoxy)-5-[4-(methylsulfonyl)phenyl]-3(2H)-pyridazinone, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

10

31. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or an isomer, a pharmaceutically acceptable salt, ester, or prodrug thereof



15 wherein:

R¹⁶ is methyl or ethyl;

R¹⁷ is chloro or fluoro;

R¹⁸ is hydrogen or fluoro;

R¹⁹ is hydrogen, fluoro, chloro, methyl, ethyl, methoxy, ethoxy or hydroxy;

20 R²⁰ is hydrogen or fluoro; and

R²¹ is chloro, fluoro, trifluoromethyl or methyl,

provided that R¹⁷, R¹⁸, R¹⁹ and R²⁰ are not all fluoro when R¹⁶ is ethyl and R¹⁹ is H.

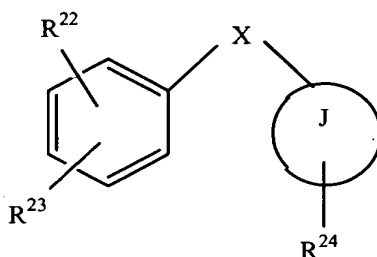
32. The composition of claim 31 wherein:

25 R¹⁶ is ethyl;

R¹⁷ and R¹⁹ are chloro;

R^{18} and R^{20} are hydrogen; and
and R^{21} is methyl.

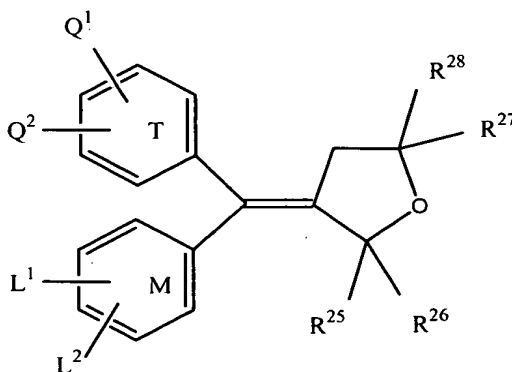
33. The composition of claim 1 wherein the cyclooxygenase-2 selective
5 inhibitor comprises a compound of the formula or an isomer, a pharmaceutically acceptable salt, an ester, or a prodrug thereof:



wherein:

- X is O or S;
 J is a carbocycle or a heterocycle;
10 R^{22} is NHSO_2CH_3 or F;
 R^{23} is H, NO_2 , or F; and
 R^{24} is H, NHSO_2CH_3 , or $(\text{SO}_2\text{CH}_3)\text{C}_6\text{H}_4$.

34. The composition of claim 1 wherein the cyclooxygenase-2 selective
15 inhibitor comprises a compound of the formula or an isomer, a pharmaceutically acceptable salt, ester, or prodrug thereof



wherein:

T and M independently are phenyl, naphthyl, a radical derived from a heterocycle comprising 5 to 6 members and possessing from 1 to 4 heteroatoms, or a radical derived from a saturated hydrocarbon ring having from 3 to 7 carbon atoms;

Q^1 , Q^2 , L^1 or L^2 are independently hydrogen, halogen, lower alkyl having from 1 to 6 carbon atoms, trifluoromethyl, or lower methoxy having from 1 to 6 carbon atoms; and at least one of Q^1 , Q^2 , L^1 or L^2 is in the para position and is $-S(O)_n-R$, wherein n is 0, 1, or 2 and R is a lower alkyl radical having 1 to 6 carbon atoms or a lower haloalkyl radical having from 1 to 6 carbon atoms, or an $-SO_2NH_2$; or,

Q^1 and Q^2 are methylenedioxy; or

L^1 and L^2 are methylenedioxy; and

R^{25} , R^{26} , R^{27} , and R^{28} are independently hydrogen, halogen, lower alkyl radical having from 1 to 6 carbon atoms, lower haloalkyl radical having from 1 to 6 carbon atoms, or an aromatic radical selected from the group consisting of phenyl, naphthyl, thienyl, furyl and pyridyl; or,

R^{25} and R^{26} are O; or,

R^{27} and R^{28} are O; or,

R^{25} , R^{26} , together with the carbon atom to which they are attached, form a saturated hydrocarbon ring having from 3 to 7 carbon atoms; or,

R^{27} , R^{28} , together with the carbon atom to which they are attached, form a saturated hydrocarbon ring having from 3 to 7 carbon atom.

35. The composition of claim 1 wherein the cyclooxygenase-2 selective inhibitor, pharmaceutically acceptable salt, isomer, or prodrug thereof is selected from the group consisting of:

3-[(3-Chloro-phenyl)-(4-methanesulfonyl-phenyl)-methylene]-dihydro-furan-2-one;

8-acetyl-3-(4-fluorophenyl)-2-(4-methylsulfonyl)phenyl-imidazo(1,2-a);

5,5-dimethyl-4-(4-methylsulfonyl)phenyl-3-phenyl-2-(5H)-furanone ;

5-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-3-(trifluoromethyl)pyrazole;

4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-1-phenyl-3-

(trifluoromethyl)pyrazole;

4-(5-(4-chlorophenyl)-3-(4-methoxyphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;

4-(3,5-bis(4-methylphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;

4-(5-(4-chlorophenyl)-3-phenyl-1H-pyrazol-1-yl)benzenesulfonamide;

4-(3,5-bis(4-methoxyphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;

- 4-(5-(4-chlorophenyl)-3-(4-methylphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-(4-nitrophenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-(5-chloro-2-thienyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(4-chloro-3,5-diphenyl-1H-pyrazol-1-yl)benzenesulfonamide;
 5 4-[5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-phenyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-chlorophenyl)-3-(difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 10 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[4-chloro-5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-(4-methylphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-phenyl-1H-pyrazol-1-yl]benzenesulfonamide;
 15 4-[3-(difluoromethyl)-5-(4-methoxyphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-cyano-5-(4-fluorophenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-(3-fluoro-4-methoxyphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(3-fluoro-4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 20 4-[4-chloro-5-phenyl-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-chlorophenyl)-3-(hydroxymethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-(N,N-dimethylamino)phenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 25 5-(4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 4-[6-(4-fluorophenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 6-(4-fluorophenyl)-7-[4-(methylsulfonyl)phenyl]spiro[3.4]oct-6-ene;
 5-(3-chloro-4-methoxyphenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 4-[6-(3-chloro-4-methoxyphenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 30 5-(3,5-dichloro-4-methoxyphenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 5-(3-chloro-4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 4-[6-(3,4-dichlorophenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 2-(3-chloro-4-fluorophenyl)-4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)thiazole;
 2-(2-chlorophenyl)-4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)thiazole;

- 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-methylthiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-trifluoromethylthiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-(2-thienyl)thiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-benzylaminothiazole;
 5 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-(1-propylamino)thiazole;
 2-[(3,5-dichlorophenoxy)methyl]-4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]thiazole;
 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-trifluoromethylthiazole;
 1-methylsulfonyl-4-[1,1-dimethyl-4-(4-fluorophenyl)cyclopenta-2,4-dien-3-yl]benzene;
 10 4-[4-(4-fluorophenyl)-1,1-dimethylcyclopenta-2,4-dien-3-yl]benzenesulfonamide;
 5-(4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hepta-4,6-diene;
 4-[6-(4-fluorophenyl)spiro[2.4]hepta-4,6-dien-5-yl]benzenesulfonamide;
 6-(4-fluorophenyl)-2-methoxy-5-[4-(methylsulfonyl)phenyl]-pyridine-3-carbonitrile;
 15 2-bromo-6-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-pyridine-3-carbonitrile;
 6-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-2-phenyl-pyridine-3-carbonitrile;
 4-[2-(4-methylpyridin-2-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-(5-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 20 4-[2-(2-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 3-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 2-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 25 2-methyl-4-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 2-methyl-6-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 4-[2-(6-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 30 2-(3,4-difluorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazole;
 4-[2-(4-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 2-(4-chlorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-methyl-1H-imidazole;

- 2-(4-chlorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-phenyl-1H-imidazole;
 2-(4-chlorophenyl)-4-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-1H-imidazole;
 2-(3-fluoro-4-methoxyphenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazole;
- 5 1-[4-(methylsulfonyl)phenyl]-2-phenyl-4-trifluoromethyl-1H-imidazole;
 2-(4-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-chloro-4-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 2-(3-fluoro-5-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-
- 10 imidazole;
 4-[2-(3-fluoro-5-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 2-(3-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-methylphenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
- 15 1-[4-(methylsulfonyl)phenyl]-2-(3-chlorophenyl)-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-chlorophenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-phenyl-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-(4-methoxy-3-chlorophenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
- 20 1-allyl-4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazole;
 4-[1-ethyl-4-(4-fluorophenyl)-5-(trifluoromethyl)-1H-pyrazol-3-yl]benzenesulfonamide;
 N-phenyl-[4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-
- 25 pyrazol-1-yl]acetamide;
 ethyl [4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazol-1-yl]acetate;
 4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-1-(2-phenylethyl)-1H-pyrazole;
 4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-1-(2-phenylethyl)-5-
- 30 (trifluoromethyl)pyrazole;
 1-ethyl-4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazole;
 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-trifluoromethyl-1H-imidazole;
 4-[4-(methylsulfonyl)phenyl]-5-(2-thiophenyl)-2-(trifluoromethyl)-1H-imidazole;

- 5-(4-fluorophenyl)-2-methoxy-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
 2-ethoxy-5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
- 5 5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-2-(2-propynyloxy)-6-(trifluoromethyl)pyridine;
 2-bromo-5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
 4-[2-(3-chloro-4-methoxyphenyl)-4,5-difluorophenyl]benzenesulfonamide;
- 10 1-(4-fluorophenyl)-2-[4-(methylsulfonyl)phenyl]benzene;
 5-difluoromethyl-4-(4-methylsulfonylphenyl)-3-phenylisoxazole;
 4-[3-ethyl-5-phenylisoxazol-4-yl]benzenesulfonamide;
 4-[5-difluoromethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
 4-[5-hydroxymethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
- 15 4-[5-methyl-3-phenyl-isoxazol-4-yl]benzenesulfonamide;
 1-[2-(4-fluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-fluoro-2-methylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-chlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(2,4-dichlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
- 20 1-[2-(4-trifluoromethylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-methylthiophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-fluorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(4-fluorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide;
 1-[2-(4-chlorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene;
- 25 4-[2-(4-chlorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide;
 4-[2-(4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 4-[2-(4-chlorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 1-[2-(4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(2,3-difluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
- 30 4-[2-(3-fluoro-4-methoxyphenyl)cyclopenten-1-yl]benzenesulfonamide;
 1-[2-(3-chloro-4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(3-chloro-4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 4-[2-(2-methylpyridin-5-yl)cyclopenten-1-yl]benzenesulfonamide;

- ethyl 2-[4-(4-fluorophenyl)-5-[4-(methylsulfonyl) phenyl]oxazol-2-yl]-2-benzyl-
acetate;
- 2-[4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]oxazol-2-yl]acetic acid;
- 2-(*tert*-butyl)-4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]oxazole;
- 5 4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-2-phenyloxazole;
- 4-(4-fluorophenyl)-2-methyl-5-[4-(methylsulfonyl)phenyl]oxazole;
- 4-[5-(3-fluoro-4-methoxyphenyl)-2-trifluoromethyl-4-oxazolyl]benzenesulfonamide;
- 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- 10 5,5-dimethyl-3-(3-fluorophenyl)-4-methylsulfonyl-2(5H)-furanone;
- 6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid;
- 4-[5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
- 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
- 4-[5-(3-fluoro-4-methoxyphenyl)-3-(difluoromethyl)-1H-pyrazol-1-
- 15 yl]benzenesulfonamide;
- 3-[1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazol-2-yl]pyridine;
- 2-methyl-5-[1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazol-2-
- yl]pyridine;
- 4-[2-(5-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-
- 20 yl]benzenesulfonamide;
- 4-[5-methyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
- 4-[5-hydroxymethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
- [2-trifluoromethyl-5-(3,4-difluorophenyl)-4-oxazolyl]benzenesulfonamide;
- 4-[2-methyl-4-phenyl-5-oxazolyl]benzenesulfonamide;
- 25 4-[5-(2-fluoro-4-methoxyphenyl)-2-trifluoromethyl-4-oxazolyl]benzenesulfonamide;
- [2-(2-chloro-6-fluoro-phenylamino)-5-methyl-phenyl]-acetic acid;
- N-(4-Nitro-2-phenoxy-phenyl)-methanesulfonamide or nimesulide;
- N-[6-(2,4-difluoro-phenoxy)-1-oxo-indan-5-yl]-methanesulfonamide;
- N-[6-(2,4-Difluoro-phenylsulfanyl)-1-oxo-1H-inden-5-yl]-methanesulfonamide,
- 30 soldium salt;
- N-[5-(4-fluoro-phenylsulfanyl)-thiophen-2-yl]-methanesulfonamide;
- 3-(3,4-Difluoro-phenoxy)-4-(4-methanesulfonyl-phenyl)-5-methyl-5-(2,2,2-trifluoro-
ethyl)-5H-furan-2-one;

- (5Z)-2-amino-5-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]-4(5H)-thiazolone;
- N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]-methanesulfonamide;
- (6aR,10aR)-3-(1,1-dimethylheptyl)-6a,7,10,10a-tetrahydro-1-hydroxy-6,6-dimethyl-5 6H-dibenzo[b,d]pyran-9-carboxylic acid;
- 4-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]dihydro-2-methyl-2H-1,2-oxazin-3(4H)-one;
- 6-dioxo-9H-purin-8-yl-cinnamic acid;
- 4-[4-(methyl)-sulfonyl]phenyl]-3-phenyl-2(5H)-furanone;
- 10 4-(5-methyl-3-phenyl-4-isoxazolyl);
- 2-(6-methylpyrid-3-yl)-3-(4-methylsulfonylphenyl)-5-chloropyridine;
- 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl];
- N-[[4-(5-methyl-3-phenyl-4-isoxazolyl)phenyl]sulfonyl];
- 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl)-1H-pyrazol-1-15 yl]benzenesulfonamide;
- (S)-6,8-dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid;
- 2-(3,4-difluorophenyl)-4-(3-hydroxy-3-methylbutoxy)-5-[4-(methylsulfonyl)phenyl]-3(2H)-pyridazinone;
- 2-trifluoromethyl-3H-naphtho[2,1-b]pyran-3-carboxylic acid;
- 20 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
- and
- [2-(2,4-dichloro-6-ethyl-3,5-dimethyl-phenylamino)-5-propyl-phenyl]-acetic acid.

36. The composition of claim 1 wherein the cyclooxygenase-2 selective
25 inhibitor, pharmaceutically acceptable salt, isomer, or prodrug thereof acts as an immunostimulant.

37. The composition of claim 1 wherein the anti-human immunodeficiency
virus agent substantially inhibits HIV infection in the human.

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38. The composition of claim 37 wherein the anti-human
immunodeficiency virus agent inhibits HIV infection by substantially inhibiting the
HIV virus.

39. The composition of claim 37 wherein the anti-human immunodeficiency virus agent substantially inhibits HIV infection by causing the human to substantially inhibit the HIV infection.

5 40. The composition of claim 1 wherein the anti-human immunodeficiency virus agent is selected from the group consisting of a viral cellular entry inhibitor, a viral replication inhibitor, a viral assembly inhibitor, an integrase inhibitor, and a human immune enhancing agent.

10 41. The composition of claim 40 wherein the viral replication inhibitor is selected from the group consisting of a nucleoside analog, a non-nucleoside reverse transcriptase inhibitor, an acyclic nucleoside phosphonate analog, a zinc finger inhibitor, a viral gene expression inhibitor, a polyamine biosynthesis inhibitor, and a genetic or anti-sense therapy agent.

15 42. The composition of claim 41 wherein the nucleoside analog is selected from the group consisting of:

(-)-cis-2-amino-1,9-dihydro-9-[4-hydroxymethyl)-2-cyclopenten-1-yl)-6H-purin-6-one;
 20 2,6-diamino-2',3'-dideoxypurine-9-ribofuranoside;
 9-(2-azido-2,3-dideoxy-b-D-erythro-pentofuranosyl)adenine;
 1-(2'-fluoro-2',3'-dideoxy-B-D-erythro-pentofuranosyl)thymine;
 9-(2-azido-2,3-dideoxy-b-D-threo-pentofuranosyl)adenine;
 3-(3-oxo-1-propenyl)-3'-azido-3'-deoxythymidine;
 25 3-azido-2',3'-dideoxy-5-chlorocytidine;
 3'-azido-3'-deoxy-6-azathymidine;
 2',3'-dideoxy-3'-fluoro-4-thiothymidine;
 2',3'-dideoxy-3'-fluoro-5-chlorocytidine;
 9-(3'-fluoro-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 30 3'-fluoro-2',3'-dideoxycytidine;
 2,6-diaminopurine-3'-fluoro-2',3'-dideoxyriboside;
 3'-fluoro-2',3'-dideoxyguanosine;
 3'-fluoro-2',3'-dideoxyuridine;
 1-[2',3'-dideoxy-3'-C-(hydroxymethyl)-.beta.-D-erythro-pentofuranosyl]cytosine;

- 3'-azido-2',3'-dideoxy-5-trifluoromethyluridine;
 3'-azido-2',3'-dideoxy-5-[(cyanomethyl)oxy]uridine;
 3'-azido-2',3'-dideoxy-5-fluorocytidine;
 3'-azido-2',3'-dideoxy-5-methylcytidine;
 5 3'-azido-2',3'-dideoxy-5-aminouridine;
 3'-azido-2',3'-dideoxy-5-methyaminouridine;
 3'-azido-2',3'-dideoxy-5-dimethylaminouridine;
 3'-azido-2',3'-dideoxy-5-hydroxyuridine;
 3'-azido-2',3'-dideoxy-5-thiocyanatouridine;
 10 9-(3'-azido-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 3'-azido-2',3'-dideoxycytidine;
 3'-azido-2',3'-dideoxyguanosine;
 3'-azido-2',3'-dideoxy-N4-5-dimethylcytidine;
 3'-azido-2',3'-dideoxy-N4-OH-5-methylcytidine;
 15 4'-azido-3'-deoxythymidine;
 4'-azido-5-chloro-2'-deoxyuridine;
 4'-azido-2'-deoxyadenosine;
 4'-azido-2'-deoxycytidine;
 4'-azido-2'-deoxyguanosine;
 20 4'-azido-2'-deoxyinosine;
 4'-azido-2'-deoxyuridine;
 1-(4-azido-2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4-dioxypyrimidine;
 4'-cyanothymidine;
 5-fluoro-2',3'-dideoxycytidine;
 25 3'-azido-3'-deoxythymidine-5'-(butylmethoxyvalinyl)phosphate;
 6-chloro-9-(2,3-dideoxy-.beta.-D-glyceropentofuranosyl)-9H-purine;
 2',3'-dideoxy-3'-fluoro-5-chlorouridine;
 butanedioic acid, compd. with (1S-cis)-4-[2-amino-6-(cyclopropylamino)-9H-purine-
 9-yl]-2-cyclopentene-1-methanol (1:1);
 30 5'-alkylglycoside carbonate of 3'-azido-3'-deoxythymidine;
 3'-azido-2',3'-dideoxy-5-bromouridine;
 3'-azido-5-chloro-2',3'-dideoxyuridine;
 3'-azido-2',3'-dideoxy-5-ethyluridine;
 3'-azido-2',3'-dideoxy-5-fluorouridine;

- 3'-azido-2',3'-dideoxy-5-iodouridine;
 2,5'-anhydro-3'-azido-3'-deoxythymidine;
 1-(2,3-dideoxy-3-azido- α -L-threo-pentofuranosyl)thymine;
 5'-[(1,4-dihydro-1-methyl-3-pyridinylcarbonyl)oxy]-3'-azido-2',3'-deoxythymidine;
 5 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid, 2-cyanoethyl ester;
 3-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-inosinic acid;
 O,O'-bis(3'-azido-3'-deoxythymidin-5'-yl)methylphosphonate;
 2,5'-anhydro-3'-azido-2',3'-dideoxyuridine;
 10 2,4(1H,3H)-pyrimidinedione,5-(3-azido-2,3-dideoxy- β -D-erythro-pentofuranosyl);
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & β -L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 (+)-9-[(1 β -2 α -3 β)-2,3-bis(hydroxymethyl)-1-cyclobutyl]adenine;
 15 9-[1 β -2 α -3 β]-2,3-bis(hydroxymethyl)-1-cyclobutyl]guanine;
 9-(2,3-dideoxy- β -D-ribofuranosyl)-6-(methylthio)purine;
 2,3-dideoxydidehydroadenosine;
 3'-azido-3'-deoxythymidine;
 2',3'-dideoxydidehydrocytidine;
 20 2,6-diaminopurine-2',3'-dideoxydidehydroboside;
 β -D-2',3'-didehydro-2',3'-dideoxy-5-fluorocytidine;
 2',3'-didehydro-2',3'-dideoxyguanosine;
 2',3'-dideoxyadenosine;
 2',3'-dideoxyguanosine;
 25 3'-deoxythymidine;
 2',3'-dideoxyinosine;
 6-dimethylaminopurine-2',3'-dideoxyriboside;
 (-)-2'-deoxy-3'-oxa-4'-thiacytidine;
 (+)-2'-deoxy-3'-oxa-4'-thiacytidine;
 30 (-)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (-)-(2R,4R)-9-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]guanine;
 (+)-(2S,4R)-1-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-5-fluorocytosine;
 2',3'-dideoxy-3'-fluoro-5-bromouridine;

- 3'-fluoro-2',3'-dideoxy-5-iodouridine;
 3'-fluoro-3'-deoxythymidine;
 (-)-(2R,5S)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 (+)-(2R,5R)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 5 .beta.-L-2',3'-didehydro-2',3'-dideoxyadenosine;
 2',3'-dideoxy-2',3'-didehydro-.beta.-L-5-5-fluorocytidine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyinosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyguanosine;
 2(1H)-pyrimidinone, 4-amino-5-fluoro-1-[(2S,5R)-tetrahydro-5-(hydroxymethyl)-2-furanyl];
 10 cis-1-[2'-hydroxymethyl-5'-(1,3-oxathiolanyl)]cytosine;
 9-(2"-fluoro-2',3'-dideoxy-B-D-threopentafuranosyl)adenine;
 5-methyl-3'-azido-2',3'-dideoxyisocytidine;
 N-ethyl-2',3'-dideoxyadenosine;
 15 6-methyl-2',3'-dideoxyadenosine;
 1-.beta.-D-ribofuranosyl-1,2,4-triazolo-3-carboxamide;
 1-(2',3'-dideoxy-2'-fluoro-.beta.-D-threo-pentofuranosyl)cytosine;
 thymidine, 2',3'-didehydro-,3'-deoxy;
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 20 3'-azido-2',3'-dideoxyuridine;
 2',3'-dideoxycytidine;
 9-[(R)-2-
 [[bis[[[(isopropoxycarbonyl)oxy]methoxy]phosphinyl]methoxy]propyl]adenine;
 25 or a prodrug thereof.

43. The composition of claim 41 wherein the non-nucleoside reverse transcriptase inhibitor is selected from the group consisting of:
 6-chloro-3-(phenylthio)-2-indolecarboxamide;
 30 1-[(5-methanesulfonamidoindol-2-yl)carbonyl]-4-[N-ethyl-N-[3-[(1,1-dimethylethyl)amino]-2-pyridinyl]amino]piperidine;
 methyl-3',3"-dichloro-4',4"-dimethoxy-5',5"-bis(methoxycarbonyl)-6,6-diphenylhexenoate;

- Methyl-3-bromo-5-(1-(5-bromo-4-methoxy-3-(methoxycarbonyl)phenyl)hept-1-enyl)-2-methoxybenzoate;
- 5-(3,5-dichlorophenyl)thio-4-isopropyl-1-(4-pyridyl)methyl-1H-imidazol-2-ylmethylcarbamate;
- 5 1-[(5-methoxyindol-2-yl)carbonyl]-4-[3-(ethylamino)-2-pyridyl]piperazine;
- Aurintricarboxylic acid;
- 5,6,7-trihydroxyflavone-7-O- β -D-glucopyranosideuronic acid;
- 1-[(6-cyano-2-indolyl)carbonyl]-4-[3-(isopropylamino)-2-pyridinyl]piperazine;
- 1-[3-(ethylamino)-2-pyridinyl]-4-[(5-hydroxy-2-indolyl)carbonyl]piperazine;
- 10 1-[(6-formyl-2-indolyl)carbonyl]-4-[3-(isopropylamino)-2-pyridinyl]piperazine;
- 1-[[5-(methylsulfonyloxy)-2-indolyl]carbonyl]-4-[3-(isopropylamino)-2-pyridinyl]piperazine;
- 1-[5-[[N-(methyl)methylsulfonylamino]-2-indolyl]carbonyl]-4-[3-(isopropylamino)-2-pyridinyl]piperazine;
- 15 1-(indolyl-2-carbonyl)-4-[3-[(1-methylethyl)amino]pyridyl]piperazine;
- bis(2-nitrophenyl)sulfone;
- Calanolide A;
- Calanolide B;
- 5-(3,5-dichlorophenyl)thio-4-isopropyl-1-(4-pyridyl)methyl-1H-imidazol-2-ylmethylcarbamate;
- 20 6-benzyl-5-methyl-2-(cyclohexyloxy)pyrimidin-2-one;
- 1-(5-methanesulphonamido)-1H-indol-2-yl-carbonyl)-4-[3-(isopropylamino)-2-pyridinyl]piperazine;
- 6-chloro-4-(cyclopropylethynyl)-3,4-dihydro-4-(trifluoromethyl)-(4S)2(1H)-quinazolinone;
- 25 6-benzyl-1-(ethoxymethyl)-5-ethyluracil;
- 5-ethyl-1-ethoxymethyl-6-(3,5-dimethylbenzyl)uracil;
- 5-ethyl-1-(ethoxymethyl)-6-(phenylselenenyl)uracil;
- 1-[(2-hydroxyethoxy)methyl]-6-(phenylthio)thymine;
- 30 1-[(ethoxy)methyl]-6-phenylthio)-5-ethyluracil;
- (-)-6-chloro-4-cyclopropylethynyl-4-trifluoromethyl-1,4-dihydro-2H-3,1-benzoxazinone;
- 1-(ethoxymethyl)-5-(1-methylethyl)-6-(phenylmethyl)-2,4(1H,3H)-pyrimidinedione;
- Phosphonoformic acid trisodium salt;

- (S)-7-methoxy-3,4-dihydro-2-[(methylthio)methyl]-3-thioxo-2(1H)-quinoxalinecarboxylic acid, isopropyl ester;
 1[(2-hydroxyethoxy)methyl]-6-(3-methylphenylthio)thymine;
 1-[(2-hydroxyethoxy)methyl]-6-(phenylthio)-2-thiothymine;
- 5 inophyllum B;
 inophyllum P;
 5-chloro-3-(phenylsulfonyl)indole-2-carboxamide;
 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol];
- 10 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol];
 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)[3,4,-dihydro-8-methoxy-1,3-dimethyl-6-isoquinolinediol],[1,2,3,4-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol];
- 15 6-(3,5-dimethylbenzyl)-1-[(2-hydroxyethoxy)methyl]-5-isopropyluracile;
 6-(3,5-dimethylbenzyl)-1-(ethoxymethyl)-5-isopropyluracile;
 1-(ethoxymethyl)-5-(1-methylethyl)-6-(phenylmethyl)-2,4(1H,3H)-pyrimidinedione;
 N11-cyclopropyl-4-methyl-5,11-dihydro-6H-dipyrido[3,2-b:2',3'-e]-[1,4]diazepin-6-one;
- 20 2-nitrophenyl phenyl sulfone;
 1-benzyloxymethyl-5-ethyl-6-(2-pyridylthio)uracil;
 4-methyl-5-(pyrazinyl)-3H-1,2-dithiole-3-thione;
 N-[2-(2-chloro-6-fluorophenethyl)]-N'-(2-thiazolyl)thiourea;
 N-(2-phenethyl)-N'-(2-thiazolyl)thiourea;
- 25 3-[(4,7-dimethyl-2-benzoxazolylmethyl)amino]-5-ethyl-6-methylpyridin-2(1H)-one;
 3-[2-(4,7-difluorobenzoxazol-2-yl)ethyl]-5-ethyl-6-methylpyridin-2(1H)-thione;
 3-ethyl-6-methyl-3-[(2-phthalimido)ethyl]-2-pyridinone;
 3-[(4,7-dichlorobenzoxazolylmethyl)amino]-5-ethyl-6-methylpyridin-2(1H)-one;
 (+/-)-4,5,6,7-tetrahydro-5-methyl-6-(2-propenyl)-imidazo-[4,5,1-jk][1,4]-
- 30 benzodiazepin-2(1H)-one;
 (+)-S-4,5,6,7-tetrahydro-5-methyl-6-(3-methyl-2-butenyl)-imidazo-[4,5,1-jk][1,4]-benzodiazepin-2(1H)-thione;
 (+)-S-4,5,6,7-tetrahydro-9-chloro-5-methyl-6-(3-methyl-2-butenyl)-imidazo[4,5,1-jk][1,4]-benzodiazepin-2(1H)-thione;

- (-)-2,6-dichloro-.alpha.-[(2-nitrophenyl)amino]benzamide;
 (+-)-2,6-dichloro-.alpha.-[(2-acetylphenyl)amino]benzamide;
 (+-)-2,6-dichloro-.alpha.-[(2-acetyl-5-methylphenyl)amino]benzamide;
 (-)-2,6-dichloro-.alpha.-[(2-acetyl-5-methylphenyl)amino]benzamide;
 5 5-(3,5-dichlorophenyl)thio-4-isopropyl-1-(4-pyridyl)methyl-1H-imidazol-2-ylmethylcarbamate;
 6-chloro-3,3-dimethyl-4-(isopropenyloxycarbonyl)-3,4-dihydroquinoxalin-2(1H)-thione;
 8,8'-[carbonylbis[imino-3,1-phenylenecarbonylimino(4-methyl-3,1-phenylene)carbonyl-imino]]bis-1,3,5-naphthalenetrisulfonic acid hexasodium salt;
 10 (R,S)-1-(2,6-difluorophenyl)-1H,3H-thiazolo[3,4-a]benzimidazole;
 (+)-(R)-9b-(1-naphthyl)-2,3-dihydrothiazolo[2,3-a]isoindol-5(9bH)-one;
 (+)-(R)-9b-(3,5-dimethylphenyl)-2,3-dihydrothiazolo[2,3-a]isoindol-5(9bH)-one;
 (+)-(S)-4,5,6,7-tetrahydro-8-chloro-5-methyl-6-(3-methyl-2-butenyl)imidazo[4,5,1-jk][1,4]benzodiazepine-2-(1H)-thione;
 15 N-[2-(2-pyridylethyl)-N'-[2-(5-bromopyridyl)]thiourea, hydrochloride;
 thymidine, 3-methyl, [2',5'-bis-O-(tert-butyldimethylsilyl)-.beta.-D-ribofuranosyl]-3'-spiro-5-(4-amino-1,2-oxathiole-2,2-dioxide);
 [1-[2',5'-bis-O-(tert-butyldimethylsilyl)-.beta.-D-ribofuranosyl]thymine]-(R)(ribo)-3'-
 20 spiro-5-(4-amino-1,2-oxathiole-2,2-dioxide);
 4-chloro-3-(isopropoxycarbonyl)phenylcarbamothioic acid, O-isopropyl ester;
 N-[4-chloro-3-(3-methyl-2-butenyloxy)phenyl]-2-methyl-3-furancarbothioamide;
 2-chloro-5[(2-methyl-5,6-dihydro-1,4-oxathiin-3-yl) carbonylamino]isopropyl ester benzoic acid;
 25 or a prodrug thereof.

44. The composition of claim 40 wherein the viral assembly inhibitor is selected from the group consisting of a protease inhibitor, a viral packaging inhibitor, a glycosylation inhibitor, and a viral RNA processing inhibitor.

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45. The composition of claim 44 wherein the protease inhibitor is selected from the group consisting of:

N-tert-butyl-1-[2(R)-hydroxy-3(S)-[[N-(2-quinolylcarbonyl)-L-asparaginy]amino]-4-phenylbutyl]-2(S)piperidinecarboxamide;

- Carbamic acid, [3-[4-(1-ethylpropyl)-2(S)-[[[(1,1-dimethylethyl)amino]carbonyl]-1-piperazinyl]-2(R)-hydroxy-1(S)-(phenylmethyl)propyl]-, tetrahydro-2(R)-(1-methylethyl)-1,1-dioxido-3(R)-thienyl ester;
- Carbamic acid, [3-[4-cyclopropyl)-2(S)-[[[(1,1-dimethylethyl)amino]carbonyl]-1-piperazinyl]-2(R)-hydroxy-1(S)-(phenylmethyl)propyl]-, tetrahydro-2(R)-(1-methylethyl)-1,1-dioxido-3(R)-thienyl ester;
- Carbamic acid, [3-[4-cyclobutyl)-2(S)-[[[(1,1-dimethylethyl)amino]carbonyl]-1-piperazinyl]-2(R)-hydroxy-1(S)-(phenylmethyl)propyl]-, tetrahydro-2(R)-(1-methylethyl)-1,1-dioxido-3(R)-thienyl ester;
- 1 1S,2S,2"S,9S,12R)-12-[2"-[[N-[(benzyloxy)carbonyl]tert-leucinyl]amino]-1'-hydroxy-3'-phenylprop-1'-yl]-9-(1-methylethyl)-7,10,13-triaza-1,4-dioxo-8,11-dioxo[14]paracyclophane;
- (1S,2S,8S,11R)-11-[2"-[[N-[(benzyloxy)carbonyl]valyl]amino]-1'-hydroxy-3'-phenylprop-1'-yl]-8-(1-methylethyl)-6,9,12-triaza-1-oxa-7,10-dioxo[13]
- 15 metacyclophane;
- (1S,2S,2"S,9S,11R)-11-[2"-[[N-[(benzyloxy)carbonyl]valyl]amino]-1'-hydroxy-3'-phenylprop-1'-yl]-8-(1-methylethyl)-6,9,12-triaza-1-oxa-7,10-dioxo[13]paracyclophane;
- (1S,2S,2"S,9S,12R)-12-[2"-[[N-[(benzyloxy)carbonyl]valyl]amino]-1'-hydroxy-3'-phenylprop-1'-yl]-9-(1-methylethyl)-7,10,13-triaza-1,4-diaza-8,11-dioxo[14]paracyclophane;
- 20 (1S,2S,2"S,15R)-15-[2"-[[N-[(benzyloxy)carbonyl]valyl]amino]-1'-hydroxy-3'-phenylprop-1'-yl]-12-(1-methylethyl)-10,13,16-triaza-1,4,7-trioxo-11,14-dioxo[17]paracyclophane;
- 25 [1(S),4(S)]-2,4,5-trideoxy-4-[[3-methyl-1-oxo-2-[[[(phenylmethoxy)carbonyl]amino]butyl]amino]-N-[[2-methyl-1-[(2-benzimidazolyl)methyl]amino]carbonyl]propyl]-5-phenyl-2-[(4-bromophenyl)methylamino-L-lyxonamide;
- 2,5-(S,S)-Bis(2-pyridylmethoxyvalyl)1,6-diphenyl-3,4-(S,S)-dihydroxyhexane;
- 30 1,2,5,6-tetradeoxy-2,5-bis[[3-methyl-2-[[methyl(2-pyridinylmethyl)amino]carbonyl]amino]-1-oxobutylamino]-1,6-diphenyl-L-altritol;
- 10-hydroxy-5-(1-methylethyl)-1-(2-pyridinyl)-3,6-dioxo-8,11-bis(phenylmethyl)-2-oxa-4,7,12-triazatridecan-13-oic acid, 5-thiazolylmethyl ester;

- 10-hydroxy-1-[2-(1-methylethyl)-4-thiazolyl]-5-(1-methylethyl)-3,6-dioxo-8,11-bis(phenylmethyl)-2,4,7,12-tetraazatridecan-13-oic acid, 3-pyridinyl ester;
(5R,6R)-2,4-bis(4-hydroxy-3-methoxybenzyl)-1,5-dibenzyl-6-hydroxy-3-oxo-1,2,4-triazacycloheptane;
- 5 Carbamic acid, (3-(((4-aminophenyl)sulfonyl)(2-methylpropyl)amino)-2-hydroxy-1-(phenylmethyl)propyl)-, tetrahydro-3-furanyl ester;
[1S-[1R*,2S*(2S*,3R*)]]-[3-[[[3-[[[(1,1-dimethylethoxy)-carbonyl]amino]-2-hydroxy-4-[4-[2-(4-morpholinyl)-2-oxoethoxy]phenyl]butyl]amino]-2-hydroxy-1-(phenylmethyl)propyl]carbamic acid, 1,1-dimethylethyl-ester;
- 10 N-(3-(2(S)-(N-(tert-butyl)carbamoyl)-4(R)-(3-pyridylmethylthio)piperidyl)-1(S)-benzylpropyl)-3-methyl-2(S)-(2-quinolylcarbonylamino)butanamide;
N-(3-(2(S)-(N-(tert-butyl)carbamoyl)-4(R)-(4-pyridylthio)piperidyl)-1(S)-benzylpropyl)-2-(2,6-dimethylphenoxy)ethanamide;
1-cyclohexyl-2-[[N-(ethoxycarbonyl)-L-valinyl]amino]-4(S)-hydroxy-5(S)-[[N-
- 15 (methoxycarbonyl)-L-valinyl]amino]-6-phenyl-2-azahexane;
1-cyclohexyl-5(S)-2,5-bis[[2-N-(methylcarbonyl)-L-valinyl]amino]-4(R)-hydroxy-6-phenyl-2-azahexane;
[4R-(4.alpha.,5.alpha.,6.beta.,7.beta.,7.beta.)]-hexahydro-5,6-dihydroxy-1,3-bis[(4-hydroxymethyl)phenyl]methyl]-4,7-bis(phenylmethyl)-2H-1,3-diazepin-2-one);
- 20 [4R-(4.alpha.,5.alpha.,6.beta.,7.beta.)]-hexahydro-5,6-dihydroxy-1,3-bis[(3-aminophenyl)methyl]-4,7-bis(phenylmethyl)-2H-1,3-diazepin-2-one];
2-[3-[3-(R)-[[[(2-cis-isopropyl-1,1-dioxotetrahydrothienyloxy)carbonyl]amino]-4-phenyl-2(R)-hydroxybutyl]]-N-(1,1-dimethylethyl)decahydro-3-isoquinolinecarboxamide;
- 25 2-[3-[3-(S)-[[[(2-cis-isopropyl-1,1-dioxotetrahydrothienyloxy)carbonyl]amino]-4-phenyl-2(R)-hydroxybutyl]]-N-(1,1-dimethylethyl)decahydro-3-isoquinolinecarboxamide;
N²-[(phenylmethoxy)carbonyl]-L-asparaginyl-(2S,3S)-2-hydroxy-4-phenyl-3-aminobutanoyl-N-(1,1-dimethylethyl)-L-prolinamide;
- 30 N-(2(R)-hydroxy-1(S)-indanyl)-5(S)-[(tert-butyloxycarbonyl)amino]-4(S)-hydroxy-6-(4-hydroxyphenyl)-2-(R)-(phenylmethyl)hexanamide;
N-(2(R)-hydroxy-1(S)-indanyl)-5(S)-[(tert-butyloxycarbonyl)amino]-4(S)-hydroxy-2(R)-[[4-(2-dimethylamino)ethoxy]phenyl]methyl]-6-(phenyl)hexanamide;

- N-(2(R)-hydroxy-1(S)-indanyl)-5(S)-[(tert-butyloxycarbonyl)amino]-4(S)-hydroxy-2(R)-[[4-[3-(4-morpholinyl)propoxy]phenyl]methyl]-6-phenyl-hexanamide;
- N-((1S)-1-[N-(2-methoxyethyl)carbamoyl]-2-methylpropyl)(4S,5S,2R)-5-[(tert-butoxy)carbonylamino]-4-hydroxy-6-phenyl-2-[(2,3,4-
- 5 trimethoxyphenyl)methyl]hexanamide;
- N-[(1S,3S,4S)-4-[(2,6-dimethylphenoxy)acetyl]amino]-3-hydroxy-5-phenyl-1-(phenylmethyl)pentyl]tetrahydro-a-(1-methylethyl)-2-oxo-, (aS)-1(2H)-pyrimidineacetamide;
- N¹-[3-[2-[(1,1-dimethylethyl)amino]carbonyl]phenyl]-2-hydroxy-1-
- 10 (phenylmethyl)propyl]-2-[(2-quinolinylcarbonyl)amino]butanediamide;
- N-[3-[2-[(1,1-dimethylethyl)amino]carbonyl]phenyl]-2-hydroxy-1-(phenylmethyl)propyl]-2(D)-(acetylamino)-3-(2-naphthalenylsulfonyl)propanamide;
- N-[3-[2-[(1,1-dimethylethyl)amino]carbonyl]phenyl]-2(R)-hydroxy-1(S)-(phenylmethyl)propyl]-2(R)-(acetylamino)-3-(1-quinolinylsulfonyl)
- 15 propanamide;
- N-2-[2'(S)-hydroxy-3'(S)-phenylmethyl-4'-aza-5'-oxo-6'(S)-methylsulfonylamido-7'-(4-fluorophenylsulfonyl)-heptyl]-(4aS,8aS)-decahydroisoquinoline-3(S)-N-t-butylcarboxamide;
- N-(1,1-dimethylethyl)-5-[2-hydroxy-3-[(3-hydroxy-2-methylbenzoyl)amino]-3-
- 20 [phenyl(thiomethyl)propyl]octahydro-thieno[3,2-c]pyridine-6-carboxamide;
- 5-[3(R)-[[[(2(R)-cis-isopropyl-1,1-dioxotetrahydrothienyl-3(R)-oxy)carbonyl]amino]-4-(phenylthio)-2(R)-hydroxybutyl]-N-(1,1-dimethylethyl)octahydrothieno[3,2-c]pyridine-6(R)-carboxamide;
- Lopinavir & Ritonavir;
- 25 [(3S-(3R*,4aR*,8aR*,2'S*,3'S*))]-2-[2'-hydroxy-3'-phenylthiomethyl-4'-aza-5'-oxo-5'-(2"-methyl-3"-hydroxy-phenyl)pentyl]-decahydroisoquinoline-3-N-t-butylcarboxamidemethanesulfonic acid);
- N-[1(S)-[[[3-[2(S)-[[1,1-dimethylethyl)amino]carbonyl]-4(R)-[(4-pyridinylmethyl)oxy]-1-piperidinyl]-2(R)-hydroxy-1(S)-
- 30 (phenylmethyl)propyl]amino]carbonyl]-2-methylpropyl]-2-quinolinecarboxamide;
- [2R-[2.alpha.(R*),4.beta.]]-4,4'-[1,2-ethanediylbis(aminocarbonyl)bis[N-benzyl-5,5-dimethyl-.alpha.[(phenylacetyl)amino]-2-thiazolidineacetamide];
- 4-[[[2-[[[5,5-dimethyl-2-[2-oxo-1-[(phenylacetyl)amino]-2-[(phenylmethyl)amino]ethyl]-4-thiazolidinyl]carbonyl]amino]ethyl]amino]carbonyl]-

- 5,5-dimethyl-.alpha.-[(phenylacetyl)amino]-N-[4(tert-butoxycarbonyl)phenyl)methyl]-,[2R-[2.alpha.(R*),4.beta.[2R*(R*),4S*]]]-2-thiazolidineacetamide;
- 4-[[[3-[3-[(1,1-dimethylethyl)amino]carbonyl]decahydro-2-isoquinoliny]-2-hydroxypropyl]amino]carbonyl]-5,5-dimethyl-.alpha.-[(phenylacetyl)amino]-N-ethyl-2-thiazolidineacetamide,[2R-[2.alpha.]]; 5
- 4-[[[3-[3-[(1,1-dimethylethyl)amino]carbonyl]decahydro-2-isoquinoliny]-2-hydroxypropyl]amino]carbonyl]-5,5-dimethyl-.alpha.-[(phenylacetyl)amino]-N-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-2-];
- (2S,3S)-3-[N-(quinoxaline-2-carbonyl)-L-asparaginy]amino-2-hydroxy-4-phenylbutanoyl-L-proline, tert-butylamide; 10
- [5S-(5R*,8R*,10R*,11R*)]-2,4,7,12-tetraazatridecan-13-oic acid,10-hydroxy-2-methyl-5-(1-methylethyl)-1-[2-(1-methylethyl)-4-thiazolyl]-3,6-dioxo-8,11-bis(phenylmethyl)-5-thiazolylmethyl ester;
- N-2-[2(S)-hydroxy-3(S)-phenylmethyl-4'-aza-5'-oxo-6(S)-methylsulfonylamido-7'-(4-fluorophenylsulfinyl)-heptyl]-(4aS,8aS)-decahydroisoquinoline-3(S)-N-t-butylcarboxamide; 15
- N1-[(1S,2R)-3-[(3S,4aS,8aS)-3-[[[(1,1-dimethylethyl)amino]carbonyl]octahydro-2(1H)-isoquinoliny]-2-hydroxy-1-(phenylmethyl)propyl]-2-[(2-quinoliny]carbonyl)amino]-(2S)-butanediamide; 20
- N-tert-butyl-1-[2(R)-hydroxy-3(S)-[[N-(2-quinolylcarbonyl)-L-asparaginy]amino]-4-phenylbutyl]-2(S)piperidinecarboxamide;
- N-[(1S)-1-(N-(lmino[(phenylmethoxy)carbonylamino]methyl)carbomoyl)-2-methylpropyl](4S,5S,2R)-5-[(tert-butoxy)carbonylamino]-4-hydroxy-6-phenyl-2-benzylhexanamide; 25
- N-tert-butyl-N'-isobutyl-N'-[2(R)-hydroxy-4-phenyl-3(S)-[4-amino-1,4-dioxo-2(S)-(2-quinoliny]lcarboxamido)butylamino]butyl]urea;
- [4R-(4.alpha.,5.alpha.,6.beta.,7.beta.)]-3,3'-[[tetrahydro-5,6-dihydroxy-2-oxo-4,7-bis(phenylmethyl)-1H-1,3-diazepine-1,3(2H)-diyl]-bis(methylene)]bis[N-1H-benzimidazol-2-yl]benzamide]; 30
- (2R,3S,4S,1'S,2'R)-4-[[[N-[(benzyloxy)carbonyl]-L-tert-leucyl]amino]-3-hydroxy-2-[(4-methoxybenzyl)amino]-5-phenylpentan(2'-hydroxy-1'-indanyl)amide;

- 5-[3(R)-[[[(1,1-dioxotetrahydrothienyl-3(S)-oxy)carbonyl]amino]-4-(phenylthio)-2(R)-hydroxybutyl]-N-(1,1-dimethylethyl)octahydrothieno[3,2-c]pyridine-6(R)-carboxamide;
- 5-[3(R)-[[[(2(R)-cis-methyl-1,1-dioxotetrahydrothienyl-3(S)-oxy)carbonyl]amino]-4-(phenylthio)-2(R)-hydroxybutyl]-N-(1,1-dimethylethyl)octahydrothieno[3,2-c]pyridine-6(R)-carboxamide;
- 5-[3(R)-[[[(2(R)-cis-isopropyl-tetrahydrothienyl-3(R)-oxy)carbonyl]amino]-4-phenyl-2(R)-hydroxybutyl]-N-(1,1-dimethylethyl)octahydrothieno[3,2-c]pyridine-6(R)-carboxamide;
- 5-[3(R)-[[[(2(R)-cis-isopropyl-1,1-dioxotetrahydrothienyl-3(R)-oxy)carbonyl]amino]-4-phenyl-2(R)-hydroxybutyl]-N-(1,1-dimethylethyl)octahydrothieno[3,2-c]pyridine-6(R)-carboxamide;
- (6R)-3-((1R)-1-[3-((5-(trifluoromethyl)(2-pyridyl)]sulfonyl)amino)phenyl]propyl)-4-hydroxy-6-(2-phenylethyl)-6-propyl-5,6-dihydro-2H-pyran-2-one;
- (2R,3S,4S)-N-[2-(4-chlorobenzylamino)-4-[[N-[(benzyloxy)carbonyl]tert-leucine]amino]-3-hydroxy-5-phenylpentanoyl]valine(2-benzimidazolyl)methylamide;
- (2R,3S,4S)-N-[2-(benzylamino)-4-[[N-[(benzyloxy)carbonyl]valyl]amino]-3-hydroxy-5-phenylpentanoyl]valine benzylamide;
- (2R,3S,4S)-N-[2-[(4-bromophenyl)methylamino]-4-[[N-[(benzyloxy)carbonyl]valyl]amino]-3-hydroxy-5-phenylpentanoyl]valinebenzylamide;
- (2R,3S,4S)-N-[2-(benzylamino)-4-[[N-[(2-benzimidazolyl)propanoyl]valyl]amino]-3-hydroxy-5-phenylpentanoyl]valine benzylamide;
- (2R,3S,4S)-N-[2-(benzylamino)-4-[[N-[(benzyloxy)carbonyl]valyl]amino]-3-hydroxy-5-phenylpentanoyl]valine(2-benzimidazolyl)methylamide;
- (2R,3S,4S)-N-[2-[(4-methoxybenzylamino)-4-[[N-[(benzyloxy)carbonyl]valyl]amino]-3-hydroxy-5-phenylpentanoyl]valine(2-benzimidazolyl)methylamide;
- [3-[[[(4-methoxyphenyl)sulfonyl](cyclopentylmethyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-tetrahydro-3-furanylester carbamic acid;
- (2-naphthalcarbonyl)Asn[decarbonylphe-hydroxyethyl]ProtOtertbutyl;
- N¹-[3-[4-[(1,1-dimethylethyl)amino]carbonyl]-5,5-dimethyl-3-thiazolidinyl]-2-hydroxy-3-oxo-1-(phenylmethyl)propyl]-2-[[[(1-naphthalenyloxy)acetyl]amino]butanediamide,[4R-[3[1S*,(S*).2S*]],4R*]];

- N-(1,1-dimethylethyl)-3-[2-hydroxy-3-[[2-[[[(5-isoquinolinyloxy)acetyl]amino]-3-methylthio)-1-oxopropyl]amino]-1-oxo-4-phenylbutyl]-5,5-dimethyl]-4-thiazolidinecarboxamide,[4R-[3[2S*,3S*(R*)],4R*]];
- 5 N-(1,1-dimethylethyl)-3-[2-hydroxy-3-[[2-[[[(5-isoquinolinyloxy)acetyl]amino]-3-methylthio)-1-oxopropyl]amino]-1-oxo-4-phenylbutyl]-4-thiazolidinecarboxamide,[4R-[3[2S*,3S*(R*)],4R*]];
- N-[2(R)-hydroxy-1(S)-indanyl]-5(S)-[[[(1,1-dimethylethoxy)carbonyl]amino]-4(S)-hydroxy-6-phenyl-2(R)-benzylhexanamide;
- 10 6-phenyl-5-(N-t-butyloxycarbonylamino)-4-hydroxy-2-(3-phenylprop-2-ene)-1-[(2-(aminomethyl)benzimidazole)-isoleucyl]-hexanone;
- N-(2(R)-hydroxy-1(S)-indanyl)-5(S)-[(tert-butyloxycarbonyl)amino]-4(S)-hydroxy-6-phenyl-2(R)-[[4-[2-(4-morpholinyl)ethoxy]phenyl]methyl]hexanamide;
- (3R,3aS,5S,6aR)-N-tert-butyl-2-[2'-hydroxy-4'-phenyl-3'-[[[(3"-hexahydrofuro[2,3-b]furanyl)oxy]carbonyl]amino]butyl]decahydroisoquinoline-3-carboxamide;
- 15 N1-[(1S,2R)-3-[(3S,4aS,8aS)-3-[[[(1,1-dimethylethyl)amino]carbonyl]octahydro-2(1H)-isoquinoliny]]-2-hydroxy-1-(phenylmethyl)propyl]-2-[(2-quinoliny]]carbonyl amino]

or a prodrug thereof.

- 20 46. The composition of claim 40 wherein the viral cellular entry inhibitor is selected from the group consisting of a virion receptor binding antagonist, a virion co-receptor binding antagonist, a viral fusion inhibitor, and a viral uncoating inhibitor.

- 25 47. The composition of claim 46 wherein the receptor binding antagonist or co-receptor binding antagonist is a CD4 receptor antagonist.

48. The composition of claim 41 wherein the human immune enhancing agent is selected from the group consisting of an antimetabolite, an antineoplastic agent, an immune modulator, a cytokine, a therapeutic vaccine or antibody, an
30 antioxidant, a hormone, and a vitamin.

49. The composition of claim 40 wherein the integrase inhibitor is selected from the group consisting of:

4-((3,4-dimethoxyphenyl)methyl) dihydro-3-((4-hydroxy-3-methoxyphenyl)methyl)-
 (3R-trans)-2(3H)-furanone;
 3,5-dicaffeoylquinic acid;
 1-methoxyaxalyl-3,5-dicaffeoylquinic acid;
 5 9-[(4,6-O-ethylidene- β -D-glucopyranosyl)oxy]-5,8,8a,9-tetrahydro-5-(4-hydroxy-
 3,5-dimethoxyphenyl)furo[3',4':6,7]naphtho[2,3-d]1,3-dioxol-6-(5aH)-one;
 Hydroxocobalamin;
 [S-(R*,R*)]-2,3-bis[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propenyl]oxy]butanedioic
 acid.

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50. The composition of claim 1 wherein the cyclooxygenase-2 selective
 inhibitor is celecoxib.

51. The composition of claim 1 wherein the anti-human immunodeficiency
 15 virus agent is selected from a natural product.

52. The composition of claim 51 wherein the natural product is selected
 from the group consisting of:

(R)-3,6-diamino-N-(aminomethyl)hexanamide;
 20 3-hydroxylup-20(29)-en-28-oic acid, (3 β .);
 3-O-(3',3'-dimethylsuccinyl)-betulinic acid;
 Conocurvone;
 Cyanovirin-N;
 3 β .-hydroxyandrost-5-en-17-one;
 25 16 α .-bromo-3 β .-hydroxyandrost-5-en-17-one;
 9-(guanidino)-N-[10-(guanidino)-1-(3-aminopropyl)-2-hydroxydecyl]nonanamide;
 6-acetyloxy-7-(acetyloxymethyl)-5-hydroxy-3,11,11,14-tetramethyl-15-
 oxotetracyclo[7.5.1.0<1,5>.0<10,12>]pentadeca-2,7-dien-4-yl] acetate;
 13-hydroxyingenol-3-(2,3-dimethylbutanoate)-13-dodecanoate;
 30 1,2-dithiolane-3-pentanoic acid;
 2,4,6,8,10,14-octadecahexaenamide, 13-hydroxy-N-[(1S)-2-hydroxy-1-methylethyl]-
 2,10,12,14,16-pentamethyl-18-phenyl-, (2E,4E,6Z,8E,10E,12R,13R,14E,16S);
 4H-pyran-4-one, 3-ethyl-6-methoxy-5-methyl-2-(2-(3-methyl-4-phenyl-3-butenyl)-4-
 o-xazolyl)-, (E);

- 12-deoxyphorbol-13-(3E,5E-decadienoate);
 3-hydroxy-20-oxonorlupan-28-oic acid, (3.beta.);
 12-deoxyphorbol-13-acetate;
 4-oxazolecarboxamide,2-[4,4',4'',5,5',5''-hexahydro-4,4',4''-trimethyl-2''-(2-phenylethenyl)[2,4':2',4''-terthiazol]-4-yl]-N,5-dimethyl-,[4R-[2[2'(E),4''S*],4'S*],4R*]]];
 Acemannan;
 5,6,7-trihydroxyflavone-7-O-b-D-glucopyranosideuronic acid;
 Calanolide A;
 10 Calanolide B;
 (1S,6S,7R,8R,8aR)-1,6,7,8-tetrahydroxyindolizidine;
 1,5-Dideoxy-1,5-imino-D-glucitol;
 3,5-dicaffeoylquinic acid;
 1-methoxyaxalyl-3,5-dicaffeoylquinic acid;
 15 hypericin;
 inophyllum B;
 inophyllum P;
 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol];
 20 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol]; and
 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)[3,4,-dihydro-8-methoxy-1,3-dimethyl-6-isoquinolinediol],[1,2,3,4-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol].

25

53. The composition of claim 37 wherein the anti-human immunodeficiency virus agent substantially inhibits viral replication, colonization, or assembly in the human.

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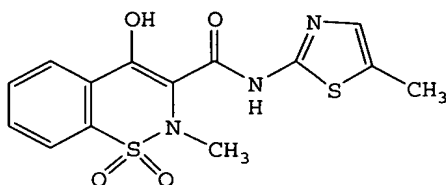
54. The composition of claim 38 wherein the anti-human immunodeficiency virus agent substantially inhibits mitosis in cells of the human.

55. The composition of claim 38 wherein the anti-human immunodeficiency virus agent substantially increases the immune response of the human.
- 5 56. The composition of claim 38 wherein the anti-human immunodeficiency virus agent substantially reduces cellular replication in the human.
57. The composition of claim 56 wherein the agent is a virucidal agent.
- 10 58. The composition of claim 57 wherein the virucidal agent is selected from the group consisting of cidofovir, formaldehyde, and glutaral or a prodrug thereof.
- 15 59. The composition of claim 57 wherein the virucidal agent is a T-cell proliferation inhibitor.
60. A method for the treatment or prevention of human immunodeficiency viral infection in a human, the method comprising administering to the human a cyclooxygenase-2 selective inhibitor or a pharmaceutically acceptable salt, isomer or
20 prodrug thereof and anti-human immunodeficiency virus agent.
61. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a chromene compound.
- 25 62. The method of claim 61 wherein the chromene compound is a benzopyran or substituted benzopyran analog.
63. The method of claim 62 wherein the benzopyran or substituted benzopyran analog is selected from the group consisting of benzothiopyrans,
30 dihydroquinolines and dihydronaphthalenes.
64. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a tricyclic compound.

65. The method of claim 64 wherein the tricyclic compound comprises a benzenesulfonamide or methylsulfonylbenzene.

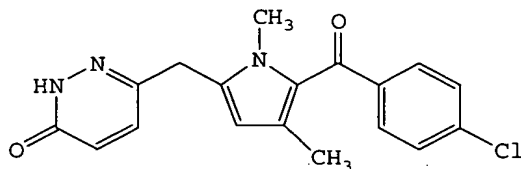
66. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a phenyl acetic acid derivative.

67. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises:



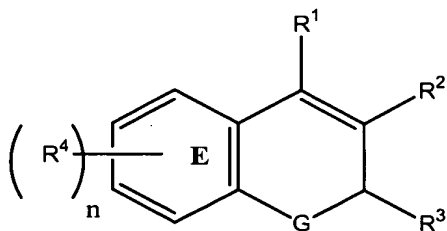
or pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

68. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises:



or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

69. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



wherein:

n is an integer which is 0, 1, 2, 3 or 4;

G is O, S or NR^a;

R^a is alkyl;

R¹ is selected from the group consisting of H and aryl;

R² is selected from the group consisting of carboxyl, aminocarbonyl,
5 alkylsulfonylaminocarbonyl and alkoxycarbonyl;

R³ is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl
and aryl optionally substituted with one or more radicals selected from alkylthio, nitro
and alkylsulfonyl; and

each R⁴ is independently selected from the group consisting of H, halo, alkyl,
10 aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy, haloalkyl,
haloalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino,
heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl,
arylaminosulfonyl, heteroarylaminosulfonyl, aralkylaminosulfonyl,
heteroaralkylaminosulfonyl, heterocyclosulfonyl, alkylsulfonyl, hydroxyarylcarbonyl,
15 nitroaryl, optionally substituted aryl, optionally substituted heteroaryl,
aralkylcarbonyl, heteroarylcarbonyl, arylcarbonyl, aminocarbonyl, and alkylcarbonyl;

wherein R⁴ together with the carbon atoms to which it is attached and the
remainder of ring E forms a naphthyl radical.

20 70. The method of claim 69 wherein:

n is an integer which is 0, 1, 2, 3 or 4;

G is O, S or NR^b;

R¹ is H;

R^b is alkyl;

25 R² is selected from the group consisting of carboxyl, aminocarbonyl,
alkylsulfonylaminocarbonyl and alkoxycarbonyl;

R³ is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl
and aryl, wherein haloalkyl, alkyl, aralkyl, cycloalkyl, and aryl each is independently
optionally substituted with one or more radicals selected from the group consisting of
30 alkylthio, nitro and alkylsulfonyl; and

each R⁴ is independently selected from the group consisting of hydrido, halo,
alkyl, aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy,
haloalkyl, haloalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino,
heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl,

arylamino sulfonyl, heteroaryl amino sulfonyl, aralkyl amino sulfonyl, heteroaralkyl amino sulfonyl, heterocyclo sulfonyl, alkyl sulfonyl, optionally substituted aryl, optionally substituted heteroaryl, aralkyl carbonyl, heteroaryl carbonyl, aryl carbonyl, aminocarbonyl, and alkyl carbonyl; or wherein R⁴ together with ring E forms a naphthyl radical.

71. The method of claim 69 wherein:
 n is an integer which is 0, 1, 2, 3 or 4;
 G is oxygen or sulfur;
 10 R¹ is H;
 R² is carboxyl, lower alkyl, lower aralkyl or lower alkoxy carbonyl;
 R³ is lower haloalkyl, lower cycloalkyl or phenyl; and
 each R⁴ is H, halo, lower alkyl, lower alkoxy, lower haloalkyl, lower haloalkoxy, lower alkylamino, nitro, amino, aminosulfonyl, lower
 15 alkyl amino sulfonyl, 5-membered heteroaryl alkyl amino sulfonyl, 6-membered heteroaryl alkyl amino sulfonyl, lower aralkyl amino sulfonyl, 5-membered nitrogen-containing heterocyclo sulfonyl, 6-membered-nitrogen containing heterocyclo sulfonyl, lower alkyl sulfonyl, optionally substituted phenyl, lower aralkyl carbonyl, or lower alkyl carbonyl; or wherein R⁴ together with the carbon atoms to which it is attached
 20 and the remainder of ring E forms a naphthyl radical.

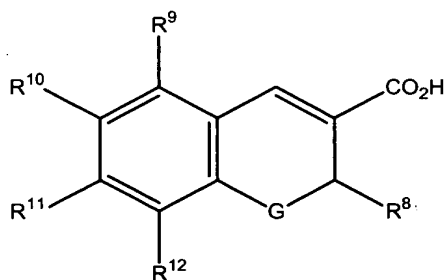
72. The method of claim 69 wherein:
 R² is carboxyl;
 R³ is lower haloalkyl; and
 25 each R⁴ is H, halo, lower alkyl, lower haloalkyl, lower haloalkoxy, lower alkylamino, amino, aminosulfonyl, lower alkyl amino sulfonyl, 5-membered heteroaryl alkyl amino sulfonyl, 6-membered heteroaryl alkyl amino sulfonyl, lower aralkyl amino sulfonyl, lower alkyl sulfonyl, 6-membered nitrogen-containing heterocyclo sulfonyl, optionally substituted phenyl, lower aralkyl carbonyl, or lower
 30 alkyl carbonyl; or wherein R⁴ together with ring E forms a naphthyl radical.

73. The method of claim 69 wherein:
 n is an integer which is 0, 1, 2, 3 or 4;

R^3 is fluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, pentafluoroethyl, heptafluoropropyl, difluoroethyl, difluoropropyl, dichloroethyl, dichloropropyl, difluoromethyl, or trifluoromethyl; and

each R^4 is H, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, butyl, isobutyl, pentyl, hexyl, methoxy, ethoxy, isopropoxy, *tert*butyloxy, trifluoromethyl, difluoromethyl, trifluoromethoxy, amino, N,N-dimethylamino, N,N-diethylamino, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, nitro, N,N-dimethylaminosulfonyl, aminosulfonyl, N-methylaminosulfonyl, N-ethylsulfonyl, 2,2-dimethylethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-(2-methylpropyl)aminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, 2,2-dimethylpropylcarbonyl, phenylacetyl or phenyl; or wherein R^4 together with the carbon atoms to which it is attached and the remainder of ring E forms a naphthyl radical.

74. The method of claim 69 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



wherein:

G is oxygen or sulfur;

R^8 is trifluoromethyl or pentafluoroethyl;

R^9 is H, chloro, or fluoro;

R^{10} is H, chloro, bromo, fluoro, iodo, methyl, *tert*-butyl, trifluoromethoxy, methoxy, benzylcarbonyl, dimethylaminosulfonyl, isopropylaminosulfonyl, methylaminosulfonyl, benzylaminosulfonyl, phenylethylaminosulfonyl, methylpropylaminosulfonyl, methylsulfonyl, or morpholinosulfonyl;

R^{11} is H, methyl, ethyl, isopropyl, *tert*-butyl, chloro, methoxy, diethylamino, or phenyl; and

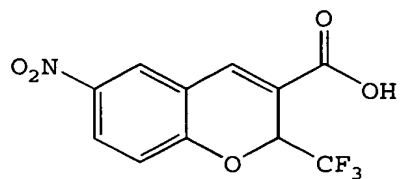
R¹² is H, chloro, bromo, fluoro, methyl, ethyl, tert-butyl, methoxy, or phenyl.

75. The method of claim 69 wherein the cyclooxygenase-2 selective inhibitor, pharmaceutically acceptable salt, isomer or prodrug thereof is selected from the group consisting of:
- 6-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-7-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 2-trifluoromethyl-3H-naphthopyran-3-carboxylic acid ;
 - 7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-bromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 5,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 7,8-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6,8-bis(dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 7-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-7-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-8-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-chloro-7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6,8-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 2-trifluoromethyl-3H-naptho[2,1-b]pyran-3-carboxylic acid;
 - 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-chloro-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-chloro-6-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 6-bromo-8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-bromo-6-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-bromo-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 - 8-bromo-5-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;

- 6-chloro-8-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-bromo-8-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[[[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 5 6-[(dimethylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[(methylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[(4-morpholino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[(1,1-dimethylethyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 10 6-[(2-methylpropyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-methylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-chloro-6-[[[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 15 6-phenylacetyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6,8-dibromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 8-chloro-5,6-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6,8-dichloro-(*S*)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-benzylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 20 6-[[N-(2-furylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-[[N-(2-phenylethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-iodo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 25 7-(1,1-dimethylethyl)-2-pentafluoroethyl-2H-1-benzopyran-3-carboxylic acid; and
 6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

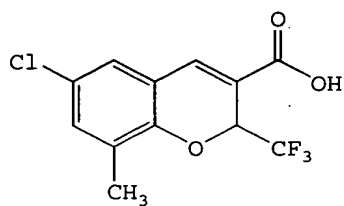
76. The method of claim 69 wherein the cyclooxygenase-2 selective inhibitor, pharmaceutically acceptable salt or prodrug thereof is selected from the
 30 group consisting of formulas:

a)



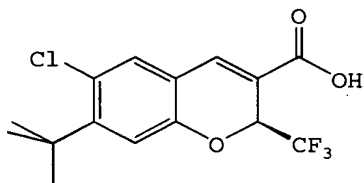
6-Nitro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid ;

b)



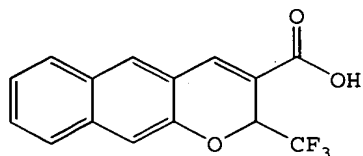
5 6-Chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid ;

c)



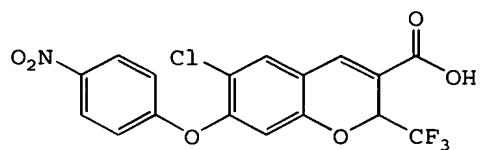
((S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid ;

10 d)



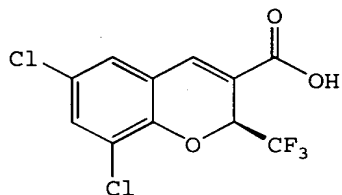
2-Trifluoromethyl-2H-naphtho[2,3-b]pyran-3-carboxylic acid ;

e)



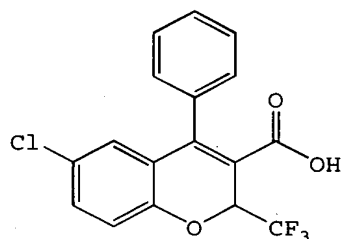
6-Chloro-7-(4-nitrophenoxy)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid ;

f)



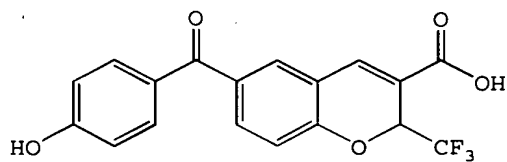
5 ((S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid ;

g)



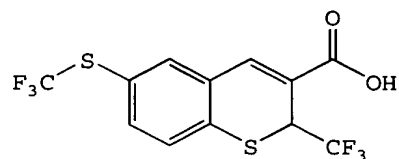
6-Chloro-2-(trifluoromethyl)-4-phenyl-2H-1-benzopyran-3-carboxylic acid ;

10 h)



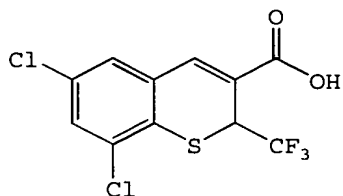
6-(4-Hydroxybenzoyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid ;

i)



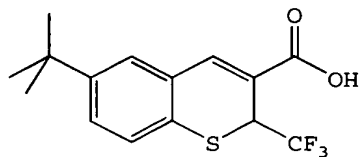
2-(Trifluoromethyl)-6-[(trifluoromethyl)thio]
-2H-1-benzothiopyran-3-carboxylic acid ;

j)



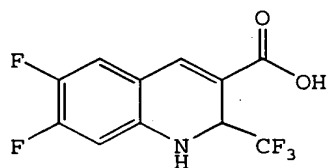
5 6,8-Dichloro-2-trifluoromethyl-2H-1-
benzothiopyran-3-carboxylic acid ;

k)



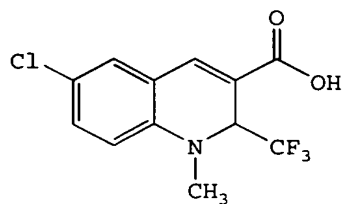
6-(1,1-Dimethylethyl)-2-(trifluoromethyl)
-2H-1-benzothiopyran-3-carboxylic acid ;

10 l)



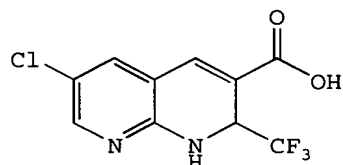
6,7-Difluoro-1,2-dihydro-2-(trifluoro
methyl)-3-quinolinecarboxylic acid ;

m)



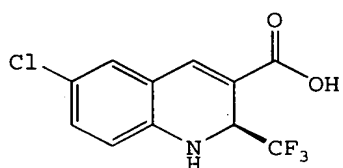
6-Chloro-1,2-dihydro-1-methyl-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

n)



5 6-Chloro-2-(trifluoromethyl)-1,2-dihydro[1,8]naphthyridine-3-carboxylic acid ;

o)

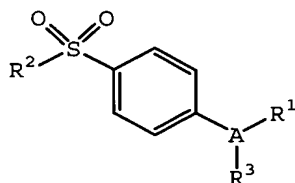


((S)-6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

and any combination thereof.

10

77. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a composition of the formula or a pharmaceutically acceptable salt or prodrug thereof:



wherein:

A is selected from the group consisting of partially unsaturated or unsaturated heterocyclcyl and partially unsaturated or unsaturated carbocyclic rings;

R¹ is selected from the group consisting of heterocyclyl,

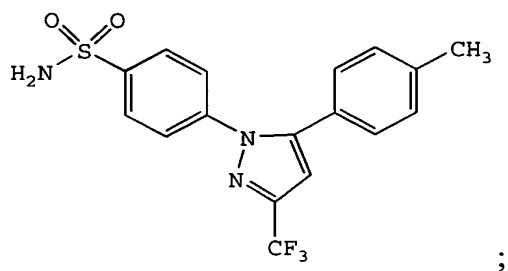
5 cycloalkyl, cycloalkenyl and aryl, wherein R¹ is optionally substituted at a substitutable position with one or more radicals selected from alkyl, haloalkyl, cyano, carboxyl, alkoxycarbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, arylamino, nitro, alkoxyalkyl, alkylsulfinyl, halo, alkoxy and alkylthio;

10 R² is selected from the group consisting of methyl or amino;
and

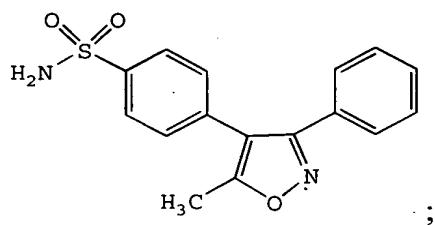
R^3 is selected from the group consisting of a radical selected from H, halo, alkyl, alkenyl, alkynyl, oxo, cyano, carboxyl, cyanoalkyl, heterocycloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, aryl, haloalkyl, heterocyclyl, cycloalkenyl, aralkyl, heterocyclylalkyl, acyl, alkylthioalkyl, hydroxyalkyl, alkoxy carbonyl, aryl carbonyl, aralkyl carbonyl, aralkenyl, alkoxyalkyl, arylthioalkyl, aryloxyalkyl, aralkylthioalkyl, aralkoxyalkyl, alkoxyaralkoxyalkyl, alkoxy carbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-arylaminocarbonyl, N-alkyl-N-arylaminocarbonyl, alkylaminocarbonylalkyl, carboxyalkyl, alkylamino, N-aryl amino, N-aralkyl amino, N-alkyl-N-aralkyl amino, N-alkyl-N-aryl amino, aminoalkyl, alkylaminoalkyl, N-aryl aminoalkyl, N-aralkyl aminoalkyl, N-alkyl-N-aralkyl aminoalkyl, N-alkyl-N-aryl aminoalkyl, aryloxy, aralkoxy, arylthio, aralkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl, alkylaminosulfonyl, N-arylaminosulfonyl, arylsulfonyl, N-alkyl-N-arylaminosulfonyl.

25 78. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor pharmaceutically acceptable salt or prodrug thereof is selected from the group consisting of:

a)

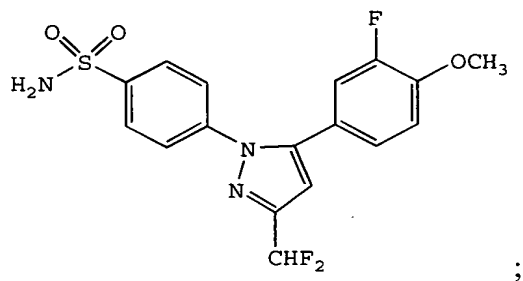


b)



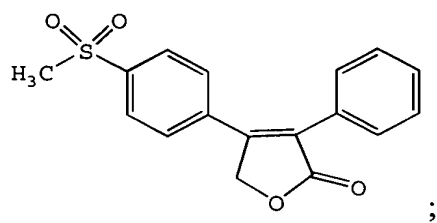
5

c)

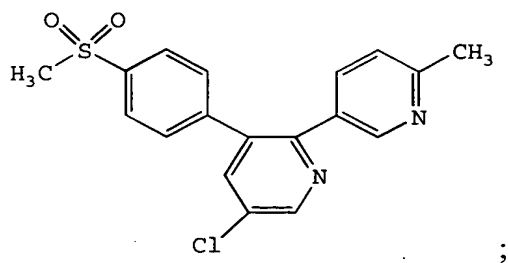


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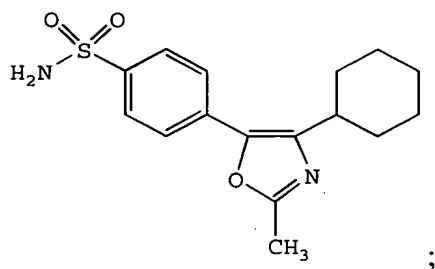
d)



e)



f)



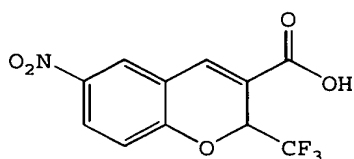
5

and any combination thereof.

79. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor or a pharmaceutically acceptable salt or prodrug thereof is selected from the group consisting of:

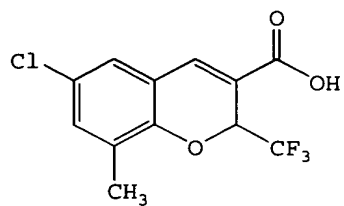
10

a)



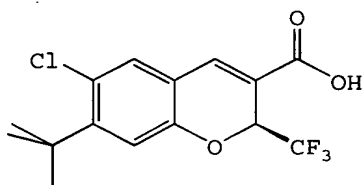
6-Nitro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid ;

b)



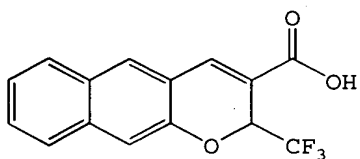
6-Chloro-8-methyl-2-trifluoromethyl
-2H-1-benzopyran-3-carboxylic acid ;

c)



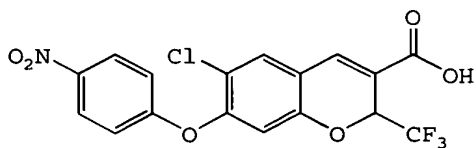
5 ((S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluo
romethyl-2H-1-benzopyran-3-carboxylic acid ;

d)



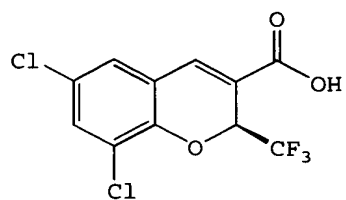
2-Trifluoromethyl-2H-naphtho[2,3-b]
pyran-3-carboxylic acid ;

10 e)



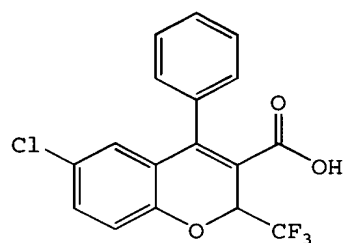
6-Chloro-7-(4-nitrophenoxy)-2-(trifluoromethyl)-2H-1-
benzopyran-3-carboxylic acid ;

f)



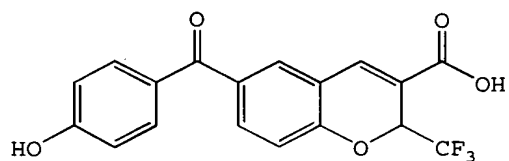
((S)-6,8-Dichloro-2-(trifluoromethyl)-
2H-1-benzopyran-3-carboxylic acid ;

g)



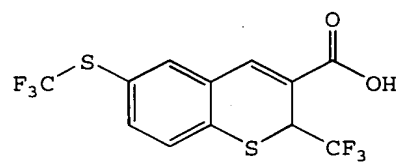
5 6-Chloro-2-(trifluoromethyl)-4-phenyl-2H-
1-benzopyran-3-carboxylic acid ;

h)



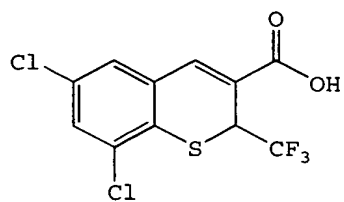
6-(4-Hydroxybenzoyl)-2-(trifluoromethyl)-
2H-1-benzopyran-3-carboxylic acid ;

10 i)



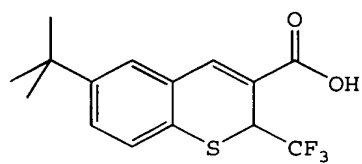
2-(Trifluoromethyl)-6-[(trifluoromethyl)thio]
-2H-1-benzothiopyran-3-carboxylic acid ;

j)



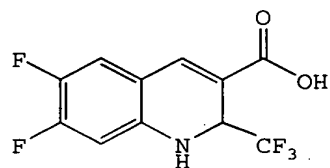
6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic acid ;

k)



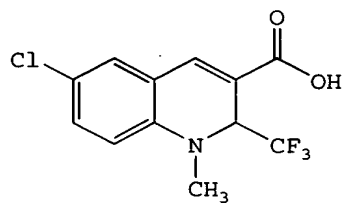
5 6-(1,1-Dimethylethyl)-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic acid ;

l)



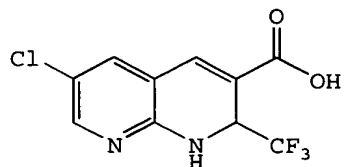
6,7-Difluoro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

10 m)



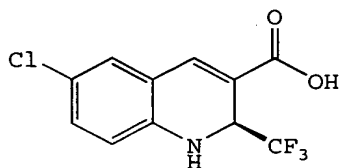
6-Chloro-1,2-dihydro-1-methyl-2-(trifluoromethyl)-3-quinolinecarboxylic acid ;

n)



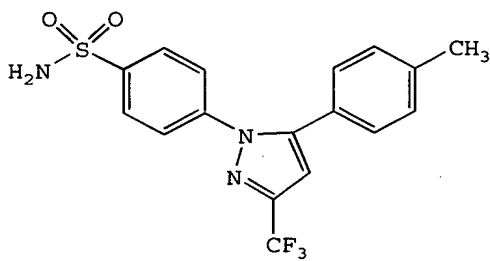
6-Chloro-2-(trifluoromethyl)-1,2-dihydro
[1,8]naphthyridine-3-carboxylic acid ;

o)



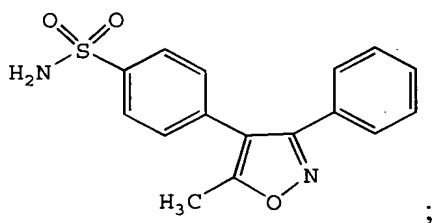
5 ((S)-6-Chloro-1,2-dihydro-2-(trifluoro
methyl)-3-quinolinecarboxylic acid ;

p)



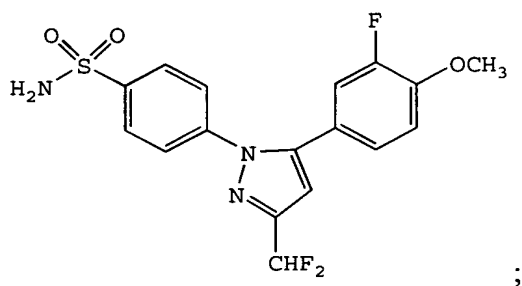
;

10 q)



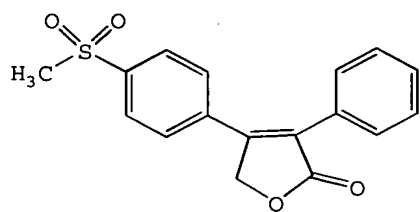
;

r)



;

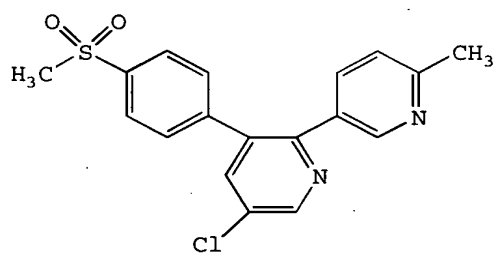
s)



5

;

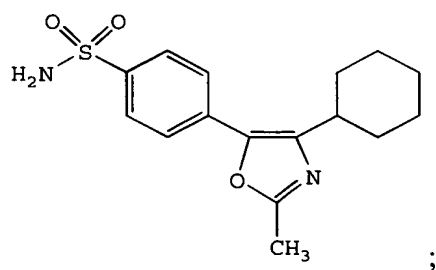
t)



;

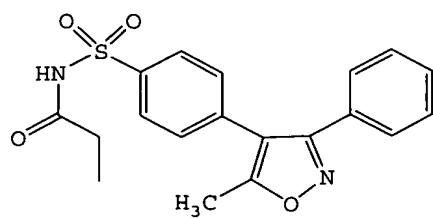
10

u)



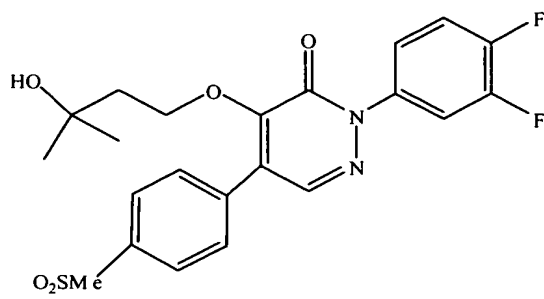
;

v)



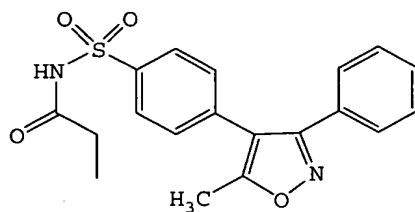
;

w)



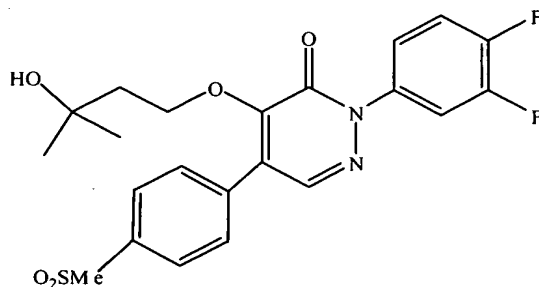
5 and any combination thereof.

80. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises:



10 or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

81. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises:



15

or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

82. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 4-[4-(methyl)-sulfonyl]phenyl]-3-phenyl-2(5H)-furanone, or a
 20 pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

83. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 4-(5-methyl-3-phenyl-4-isoxazolyl), or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

5 84. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 2-(6-methylpyrid-3-yl)-3-(4-methylsulfonylphenyl)-5-chloropyridine, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

10 85. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl], or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

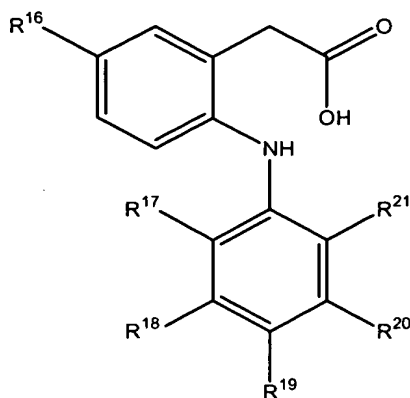
15 86. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises N-[[4-(5-methyl-3-phenyl-4-isoxazolyl)phenyl]sulfonyl], or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

20 87. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

25 88. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises (S)-6,8-dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

30 89. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises 2-(3,4-difluorophenyl)-4-(3-hydroxy-3-methylbutoxy)-5-[4-(methylsulfonyl)phenyl]-3(2H)-pyridazinone, or a pharmaceutically acceptable salt, ester, isomer or prodrug thereof.

90. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



wherein:

R^{16} is methyl or ethyl;

R^{17} is chloro or fluoro;

R^{18} is hydrogen or fluoro;

5 R^{19} is hydrogen, fluoro, chloro, methyl, ethyl, methoxy, ethoxy or hydroxy;

R^{20} is hydrogen or fluoro; and

R^{21} is chloro, fluoro, trifluoromethyl or methyl,

provided that R^{17} , R^{18} , R^{19} and R^{20} are not all fluoro when R^{16} is ethyl and R^{19} is H.

10

91. The method of claim 90 wherein:

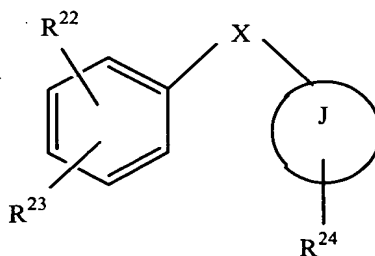
R^{16} is ethyl;

R^{17} and R^{19} are chloro;

R^{18} and R^{20} are hydrogen; and

15 and R^{21} is methyl.

92. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt or prodrug thereof:



wherein:

X is O or S;

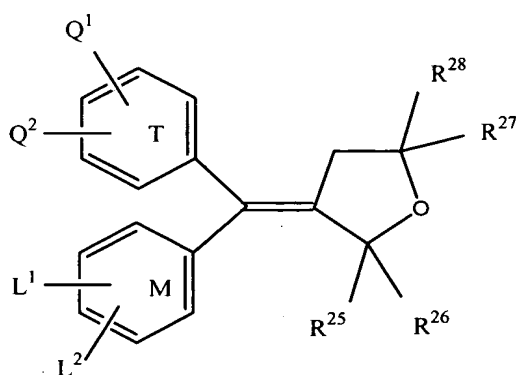
J is a carbocycle or a heterocycle;

R²² is NHSO₂CH₃ or F;

5 R²³ is H, NO₂, or F; and

R²⁴ is H, NHSO₂CH₃, or (SO₂CH₃)C₆H₄.

93. The method of claim 60 wherein the cyclooxygenase-2 selective
inhibitor comprises a compound of the formula or a pharmaceutically acceptable salt
10 or prodrug thereof



wherein:

T and M independently are phenyl, naphthyl, a radical derived from a heterocycle comprising 5 to 6 members and possessing from 1 to 4 heteroatoms, or a radical derived from a saturated hydrocarbon ring having from 3 to 7 carbon atoms;

15 Q¹, Q², L¹ or L² are independently hydrogen, halogen, lower alkyl having from 1 to 6 carbon atoms, trifluoromethyl, or lower methoxy having from 1 to 6 carbon atoms; and at least one of Q¹, Q², L¹ or L² is in the para position and is -S(O)_n-R, wherein n is 0, 1, or 2 and R is a lower alkyl radical having 1 to 6 carbon atoms or a lower haloalkyl radical having from 1 to 6 carbon atoms, or an -SO₂NH₂; or,

20 Q¹ and Q² are methylenedioxy; or

L¹ and L² are methylenedioxy; and

R²⁵, R²⁶, R²⁷, and R²⁸ are independently hydrogen, halogen, lower alkyl radical having from 1 to 6 carbon atoms, lower haloalkyl radical having from 1 to 6 carbon atoms, or an aromatic radical selected from the group consisting of phenyl, naphthyl, thienyl, furyl and pyridyl; or,

25

R²⁵ and R²⁶ are O; or,

R²⁷ and R²⁸ are O; or,

R²⁵, R²⁶, together with the carbon atom to which they are attached, form a saturated hydrocarbon ring having from 3 to 7 carbon atoms; or,

5 R²⁷, R²⁸, together with the carbon atom to which they are attached, form a saturated hydrocarbon ring having from 3 to 7 carbon atoms.

94. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor pharmaceutically acceptable salt, isomer, or prodrug thereof is selected from the group consisting of:

3-[(3-Chloro-phenyl)-(4-methanesulfonyl-phenyl)-methylene]-dihydro-furan-2-one;
 8-acetyl-3-(4-fluorophenyl)-2-(4-methylsulfonyl)phenyl-imidazo(1,2-a);
 5,5-dimethyl-4-(4-methylsulfonyl)phenyl-3-phenyl-2-(5H)-furanone ;
 5-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-3-(trifluoromethyl)pyrazole;
 15 4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-1-phenyl-3-(trifluoromethyl)pyrazole;
 4-(5-(4-chlorophenyl)-3-(4-methoxyphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(3,5-bis(4-methylphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-phenyl-1H-pyrazol-1-yl)benzenesulfonamide;
 20 4-(3,5-bis(4-methoxyphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-(4-methylphenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-(4-nitrophenyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(5-(4-chlorophenyl)-3-(5-chloro-2-thienyl)-1H-pyrazol-1-yl)benzenesulfonamide;
 4-(4-chloro-3,5-diphenyl-1H-pyrazol-1-yl)benzenesulfonamide;
 25 4-[5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-phenyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-chlorophenyl)-3-(difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 30 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[4-chloro-5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-(4-methylphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-phenyl-1H-pyrazol-1-yl]benzenesulfonamide;

- 4-[3-(difluoromethyl)-5-(4-methoxyphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-cyano-5-(4-fluorophenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[3-(difluoromethyl)-5-(3-fluoro-4-methoxyphenyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 5 4-[5-(3-fluoro-4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[4-chloro-5-phenyl-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-chlorophenyl)-3-(hydroxymethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-(N,N-dimethylamino)phenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 10 5-(4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 4-[6-(4-fluorophenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 6-(4-fluorophenyl)-7-[4-(methylsulfonyl)phenyl]spiro[3.4]oct-6-ene;
 5-(3-chloro-4-methoxyphenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 15 4-[6-(3-chloro-4-methoxyphenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 5-(3,5-dichloro-4-methoxyphenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 5-(3-chloro-4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hept-5-ene;
 4-[6-(3,4-dichlorophenyl)spiro[2.4]hept-5-en-5-yl]benzenesulfonamide;
 2-(3-chloro-4-fluorophenyl)-4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)thiazole;
 20 2-(2-chlorophenyl)-4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)thiazole;
 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-methylthiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-trifluoromethylthiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-(2-thienyl)thiazole;
 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-benzylaminothiazole;
 25 4-(4-fluorophenyl)-5-(4-methylsulfonylphenyl)-2-(1-propylamino)thiazole;
 2-[(3,5-dichlorophenoxy)methyl]-4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]thiazole;
 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-trifluoromethylthiazole;
 1-methylsulfonyl-4-[1,1-dimethyl-4-(4-fluorophenyl)cyclopenta-2,4-dien-3-yl]benzene;
 30 4-[4-(4-fluorophenyl)-1,1-dimethylcyclopenta-2,4-dien-3-yl]benzenesulfonamide;
 5-(4-fluorophenyl)-6-[4-(methylsulfonyl)phenyl]spiro[2.4]hepta-4,6-diene;
 4-[6-(4-fluorophenyl)spiro[2.4]hepta-4,6-dien-5-yl]benzenesulfonamide;
 6-(4-fluorophenyl)-2-methoxy-5-[4-(methylsulfonyl)phenyl]-pyridine-3-carbonitrile;

- 2-bromo-6-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-pyridine-3-carbonitrile;
 6-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-2-phenyl-pyridine-3-carbonitrile;
 4-[2-(4-methylpyridin-2-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
- 5 4-[2-(5-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-(2-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
- 3-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
- 10 2-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 2-methyl-4-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
 2-methyl-6-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine;
- 15 4-[2-(6-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 2-(3,4-difluorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazole;
- 4-[2-(4-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
- 20 2-(4-chlorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-methyl-1H-imidazole;
 2-(4-chlorophenyl)-1-[4-(methylsulfonyl)phenyl]-4-phenyl-1H-imidazole;
 2-(4-chlorophenyl)-4-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-1H-imidazole;
 2-(3-fluoro-4-methoxyphenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazole;
- 25 1-[4-(methylsulfonyl)phenyl]-2-phenyl-4-trifluoromethyl-1H-imidazole;
 2-(4-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-chloro-4-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
- 2-(3-fluoro-5-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazole;
- 30 4-[2-(3-fluoro-5-methylphenyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 2-(3-methylphenyl)-1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-methylphenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;

- 1-[4-(methylsulfonyl)phenyl]-2-(3-chlorophenyl)-4-trifluoromethyl-1H-imidazole;
 4-[2-(3-chlorophenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-phenyl-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
 4-[2-(4-methoxy-3-chlorophenyl)-4-trifluoromethyl-1H-imidazol-1-yl]benzenesulfonamide;
 5 1-allyl-4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazole;
 4-[1-ethyl-4-(4-fluorophenyl)-5-(trifluoromethyl)-1H-pyrazol-3-yl]benzenesulfonamide;
 10 N-phenyl-[4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazol-1-yl]acetamide;
 ethyl [4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazol-1-yl]acetate;
 4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-1-(2-phenylethyl)-1H-pyrazole;
 15 4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-1-(2-phenylethyl)-5-(trifluoromethyl)pyrazole;
 1-ethyl-4-(4-fluorophenyl)-3-[4-(methylsulfonyl)phenyl]-5-(trifluoromethyl)-1H-pyrazole;
 5-(4-fluorophenyl)-4-(4-methylsulfonylphenyl)-2-trifluoromethyl-1H-imidazole;
 20 4-[4-(methylsulfonyl)phenyl]-5-(2-thiophenyl)-2-(trifluoromethyl)-1H-imidazole;
 5-(4-fluorophenyl)-2-methoxy-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
 2-ethoxy-5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
 25 5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-2-(2-propynyloxy)-6-(trifluoromethyl)pyridine;
 2-bromo-5-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-6-(trifluoromethyl)pyridine;
 4-[2-(3-chloro-4-methoxyphenyl)-4,5-difluorophenyl]benzenesulfonamide;
 30 1-(4-fluorophenyl)-2-[4-(methylsulfonyl)phenyl]benzene;
 5-difluoromethyl-4-(4-methylsulfonylphenyl)-3-phenylisoxazole;
 4-[3-ethyl-5-phenylisoxazol-4-yl]benzenesulfonamide;
 4-[5-difluoromethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
 4-[5-hydroxymethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;

- 4-[5-methyl-3-phenyl-isoxazol-4-yl]benzenesulfonamide;
 1-[2-(4-fluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-fluoro-2-methylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-chlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 5 1-[2-(2,4-dichlorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-trifluoromethylphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-methylthiophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 1-[2-(4-fluorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(4-fluorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide;
 10 1-[2-(4-chlorophenyl)-4,4-dimethylcyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(4-chlorophenyl)-4,4-dimethylcyclopenten-1-yl]benzenesulfonamide;
 4-[2-(4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 4-[2-(4-chlorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 1-[2-(4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 15 1-[2-(2,3-difluorophenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(3-fluoro-4-methoxyphenyl)cyclopenten-1-yl]benzenesulfonamide;
 1-[2-(3-chloro-4-methoxyphenyl)cyclopenten-1-yl]-4-(methylsulfonyl)benzene;
 4-[2-(3-chloro-4-fluorophenyl)cyclopenten-1-yl]benzenesulfonamide;
 4-[2-(2-methylpyridin-5-yl)cyclopenten-1-yl]benzenesulfonamide;
 20 ethyl 2-[4-(4-fluorophenyl)-5-[4-(methylsulfonyl) phenyl]oxazol-2-yl]-2-benzyl-
 acetate;
 2-[4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]oxazol-2-yl]acetic acid;
 2-(*tert*-butyl)-4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]oxazole;
 4-(4-fluorophenyl)-5-[4-(methylsulfonyl)phenyl]-2-phenyloxazole;
 25 4-(4-fluorophenyl)-2-methyl-5-[4-(methylsulfonyl)phenyl]oxazole;
 4-[5-(3-fluoro-4-methoxyphenyl)-2-trifluoromethyl-4-oxazolyl]benzenesulfonamide;
 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
 5,5-dimethyl-3-(3-fluorophenyl)-4-methylsulfonyl-2(5H)-furanone;
 30 6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid;
 4-[5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 4-[5-(3-fluoro-4-methoxyphenyl)-3-(difluoromethyl)-1H-pyrazol-1-
 yl]benzenesulfonamide;

- 3-[1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazol-2-yl]pyridine;
 2-methyl-5-[1-[4-(methylsulfonyl)phenyl]-4-trifluoromethyl-1H-imidazol-2-yl]pyridine;
 4-[2-(5-methylpyridin-3-yl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide;
 4-[5-methyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
 4-[5-hydroxymethyl-3-phenylisoxazol-4-yl]benzenesulfonamide;
 [2-trifluoromethyl-5-(3,4-difluorophenyl)-4-oxazolyl]benzenesulfonamide;
 4-[2-methyl-4-phenyl-5-oxazolyl]benzenesulfonamide;
 4-[5-(2-fluoro-4-methoxyphenyl)-2-trifluoromethyl-4-oxazolyl]benzenesulfonamide;
 [2-(2-chloro-6-fluoro-phenylamino)-5-methyl-phenyl]-acetic acid;
 N-(4-Nitro-2-phenoxy-phenyl)-methanesulfonamide or nimesulide;
 N-[6-(2,4-difluoro-phenoxy)-1-oxo-indan-5-yl]-methanesulfonamide;
 N-[6-(2,4-Difluoro-phenylsulfanyl)-1-oxo-1H-inden-5-yl]-methanesulfonamide,
 sodium salt;
 N-[5-(4-fluoro-phenylsulfanyl)-thiophen-2-yl]-methanesulfonamide;
 3-(3,4-Difluoro-phenoxy)-4-(4-methanesulfonyl-phenyl)-5-methyl-5-(2,2,2-trifluoroethyl)-5H-furan-2-one;
 (5Z)-2-amino-5-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]-4(5H)-thiazolone;
 N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]-methanesulfonamide;
 (6aR,10aR)-3-(1,1-dimethylheptyl)-6a,7,10,10a-tetrahydro-1-hydroxy-6,6-dimethyl-6H-dibenzo[b,d]pyran-9-carboxylic acid;
 4-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]dihydro-2-methyl-2H-1,2-oxazin-3(4H)-one;
 6-dioxo-9H-purin-8-yl-cinnamic acid;
 4-[4-(methyl)-sulfonyl]phenyl]-3-phenyl-2(5H)-furanone;
 4-(5-methyl-3-phenyl-4-isoxazolyl);
 2-(6-methylpyrid-3-yl)-3-(4-methylsulfonylphenyl)-5-chloropyridine;
 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl];
 N-[[4-(5-methyl-3-phenyl-4-isoxazolyl)phenyl]sulfonyl];
 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide;
 (S)-6,8-dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid;

2-(3,4-difluorophenyl)-4-(3-hydroxy-3-methylbutoxy)-5-[4-(methylsulfonyl)phenyl]-
3(2H)-pyridazinone;
2-trifluoromethyl-3H-naphtho[2,1-b]pyran-3-carboxylic acid;
6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid;
5 and
[2-(2,4-dichloro-6-ethyl-3,5-dimethyl-phenylamino)-5-propyl-phenyl]-acetic acid.

95. The method of claim 60 wherein the cyclooxygenase-2 selective
inhibitor, pharmaceutically acceptable salt, isomer, or prodrug thereof acts as an
10 immunostimulant.

96. The method of claim 60 wherein the anti-human immunodeficiency
virus agent substantially inhibits HIV infection in the human.

15 97. The method of claim 96 wherein the anti-human immunodeficiency
virus agent inhibits HIV infection by substantially inhibiting the HIV virus.

98. The method of claim 96 wherein the anti-human immunodeficiency
virus agent substantially inhibits HIV infection by causing the human to substantially
20 inhibit the HIV infection.

99. The method of claim 96 wherein the anti-human immunodeficiency
virus agent is selected from the group consisting of a viral cellular entry inhibitor, a
viral replication inhibitor, a viral assembly inhibitor, an integrase inhibitor, and a
25 human immune enhancing agent.

100. The method of claim 99 wherein the viral replication inhibitor is
selected from the group consisting of a nucleoside analog, a non-nucleoside reverse
transcriptase inhibitor, a acyclic nucleoside phosphonate analog, a zinc finger
30 inhibitor, a viral gene expression inhibitor, a polyamine biosynthesis inhibitor, and a
genetic or anti-sense therapy agent.

101. The method of claim 100 wherein the nucleoside analog is selected
from the group consisting of:

- (-)-cis-2-amino-1,9-dihydro-9-[4-hydroxymethyl)-2-cyclopenten-1-yl)-6H-purin-6-one;
- 2,6-diamino-2',3'-dideoxypurine-9-ribofuranoside;
- 9-(2-azido-2,3-dideoxy-b-D-erythro-pentofuranosyl)adenine;
- 5 1-(2'-fluoro-2',3'-dideoxy-B-D-erythro-pentofuranosyl)thymine;
- 9-(2-azido-2,3-dideoxy-b-D-threo-pentofuranosyl)adenine;
- 3-(3-oxo-1-propenyl)-3'-azido-3'-deoxythymidine;
- 3-azido-2',3'-dideoxy-5-chlorocytidine;
- 3'-azido-3'-deoxy-6-azathymidine;
- 10 2',3'-dideoxy-3'-fluoro-4-thiothymidine;
- 2',3'-dideoxy-3'-fluoro-5-chlorocytidine;
- 9-(3'-fluoro-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
- 3'-fluoro-2',3'-dideoxycytidine;
- 2,6-diaminopurine-3'-fluoro-2',3'-dideoxyriboside;
- 15 3'-fluoro-2',3'-dideoxyguanosine;
- 3'-fluoro-2',3'-dideoxyuridine;
- 1-[2',3'-dideoxy-3'-C-(hydroxymethyl)-.beta.-D-erythro-pentofuranosyl]cytosine;
- 3'-azido-2',3'-dideoxy-5-trifluoromethyluridine;
- 3'-azido-2',3'-dideoxy-5-[(cyanomethyl)oxy]uridine;
- 20 3'-azido-2',3'-dideoxy-5-fluorocytidine;
- 3'-azido-2',3'-dideoxy-5-methylcytidine;
- 3'-azido-2',3'-dideoxy-5-aminouridine;
- 3'-azido-2',3'-dideoxy-5-methylaminouridine;
- 3'-azido-2',3'-dideoxy-5-dimethylaminouridine;
- 25 3'-azido-2',3'-dideoxy-5-hydroxyuridine;
- 3'-azido-2',3'-dideoxy-5-thiocyanatouridine;
- 9-(3'-azido-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
- 3'-azido-2',3'-dideoxycytidine;
- 3'-azido-2',3'-dideoxyguanosine;
- 30 3'-azido-2',3'-dideoxy-N4-5-dimethylcytidine;
- 3'-azido-2',3'-dideoxy-N4-OH-5-methylcytidine;
- 4'-azido-3'-deoxythymidine;
- 4'-azido-5-chloro-2'-deoxyuridine;
- 4'-azido-2'-deoxyadenosine;

- 4'-azido-2'-deoxycytidine;
 4'-azido-2'-deoxyguanosine;
 4'-azido-2'-deoxyinosine;
 4'-azido-2'-deoxyuridine;
- 5 1-(4-azido-2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4-dioxypyrimidine;
 4'-cyanothymidine;
 5-fluoro-2',3'-dideoxycytidine;
 3'-azido-3'-deoxythymidine-5'-(butylmethoxyvalinyl)phosphate;
 6-chloro-9-(2,3-dideoxy-.beta.-D-glyceropentofuranosyl)-9H-purine;
- 10 2',3'-dideoxy-3'-fluoro-5-chlorouridine;
 butanedioic acid, compd. with (1S-cis)-4-[2-amino-6-(cyclopropylamino)-9H-purine-9-yl]-2-cyclopentene-1-methanol (1:1);
 5'-alkylglycoside carbonate of 3'-azido-3'-deoxythymidine;
 3'-azido-2',3'-dideoxy-5-bromouridine;
- 15 3'-azido-5-chloro-2',3'-dideoxyuridine;
 3'-azido-2',3'-dideoxy-5-ethyluridine;
 3'-azido-2',3'-dideoxy-5-fluorouridine;
 3'-azido-2',3'-dideoxy-5-iodouridine;
 2,5'-anhydro-3'-azido-3'-deoxythymidine;
- 20 1-(2,3-dideoxy-3-azido-a-L-threo-pentofuranosyl)thymine;
 5'-[(1,4-dihydro-1-methyl-3-pyridinylcarbonyl)oxy]-3'-azido-2',3'-dideoxythymidine;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid, 2-cyanoethyl ester;
 3-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-inosinic acid;
- 25 O,O'-bis(3'-azido-3'-deoxythymidin-5'-yl)methylphosphonate;
 2,5'-anhydro-3'-azido-2',3'-dideoxyuridine;
 2,4(1H,3H)-pyrimidinedione,5-(3-azido-2,3-dideoxy-.beta.-D-erythro-pentofuranosyl);
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-
- 30 methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 (+)-9-[(1.beta.-2.alpha.-3.beta.)-2,3-bis(hydroxymethyl)-1-cyclobutyl]adenine;
 9-[1.beta.-2.alpha.-3.beta.]-2,3-bis(hydroxymethyl)-1-cyclobutyl]guanine;
 9-(2,3-dideoxy-.beta.-D-ribofuranosyl)-6-(methylthio)purine;
 2,3-dideoxydidehydroadenosine;

- 3'-azido-3'-deoxythymidine;
 2',3'-dideoxydidehydrocytidine;
 2,6-diaminopurine-2',3'-dideoxydidehydrorbose;
 b-D-2',3'-didehydro-2',3'-dideoxy-5-fluorocytidine;
 5 2',3'-didehydro-2',3'-dideoxyguanosine;
 2',3'-dideoxyadenosine;
 2',3'-dideoxyguanosine;
 3'-deoxythymidine;
 2',3'-dideoxyinosine;
 10 6-dimethylaminopurine-2',3'-dideoxyriboside;
 (-)-2'-deoxy-3'-oxa-4'-thiocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thiocytidine;
 (-)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 15 (-)-(2R,4R)-9-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]guanine;
 (+)-(2S,4R)-1-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-5-fluorocytosine;
 2',3'-dideoxy-3'-fluoro-5-bromouridine;
 3'-fluoro-2',3'-dideoxy-5-iodouridine;
 3'-fluoro-3'-deoxythymidine;
 20 (-)-(2R,5S)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 (+)-(2R,5R)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyadenosine;
 2',3'-dideoxy-2',3'-didehydro-.beta.-L-5-5-fluorocytidine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyinosine;
 25 .beta.-L-2',3'-didehydro-2',3'-dideoxyguanosine;
 2(1H)-pyrimidinone, 4-amino-5-fluoro-1-[(2S,5R)-tetrahydro-5-(hydroxymethyl)-2-furanyl];
 cis-1-[2'-hydroxymethyl-5'-(1,3-oxathiolanyl)]cytosine;
 9-(2"-fluoro-2',3'-dideoxy-B-D-threopentafuranosyl)adenine;
 30 5-methyl-3'-azido-2'3'-dideoxyisocytidine;
 N-ethyl-2',3'-dideoxyadenosine;
 6-methyl-2',3'-dideoxyadenosine;
 1-.beta.-D-ribofuranosyl-1,2,4-triazolo-3-carboxamide;
 1-(2',3'-dideoxy-2'-fluoro-.beta.-D-threo-pentofuranosyl)cytosine;

- thymidine, 2',3'-didehydro-,3'-deoxy;
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 3'-azido-2',3'-dideoxyuridine;
- 5 2',3'-dideoxycytidine;
 9-[(R)-2-
 [[bis[[(isopropoxycarbonyl)oxy]methoxy]phosphinyl]methoxy]propyl]adenine;
 or a prodrug thereof.
- 10 102. The method of claim 100 wherein the non-nucleoside reverse
 transcriptase inhibitor is selected from the group consisting of:
 (-)-cis-2-amino-1,9-dihydro-9-[4-hydroxymethyl)-2-cyclopenten-1-yl)-6H-purin-6-one;
 2,6-diamino-2',3'-dideoxypurine-9-ribofuranoside;
- 15 9-(2-azido-2,3-dideoxy-b-D-erythro-pentofuranosyl)adenine;
 1-(2'-fluoro-2',3'-dideoxy-B-D-erythro-pentofuranosyl)thymine;
 9-(2-azido-2,3-dideoxy-b-D-threo-pentofuranosyl)adenine;
 3-(3-oxo-1-propenyl)-3'-azido-3'-deoxythymidine;
 3-azido-2',3'-dideoxy-5-chlorocytidine;
- 20 3'-azido-3'-deoxy-6-azathymidine;
 2',3'-dideoxy-3'-fluoro-4-thiothymidine;
 2',3'-dideoxy-3'-fluoro-5-chlorocytidine;
 9-(3'-fluoro-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 3'-fluoro-2',3'-dideoxycytidine;
- 25 2,6-diaminopurine-3'-fluoro-2',3'-dideoxyriboside;
 3'-fluoro-2',3'-dideoxyguanosine;
 3'-fluoro-2',3'-dideoxyuridine;
 1-[2',3'-dideoxy-3'-C-(hydroxymethyl)-.beta.-D-erythro-pentofuranosyl]cytosine;
 3'-azido-2',3'-dideoxy-5-trifluoromethyluridine;
- 30 3'-azido-2',3'-dideoxy-5-[(cyanomethyl)oxy]uridine;
 3'-azido-2',3'-dideoxy-5-fluorocytidine;
 3'-azido-2',3'-dideoxy-5-methylcytidine;
 3'-azido-2',3'-dideoxy-5-aminouridine;
 3'-azido-2',3'-dideoxy-5-methyaminouridine;

- 3'-azido-2',3'-dideoxy-5-dimethylaminouridine;
 3'-azido-2',3'-dideoxy-5-hydroxyuridine;
 3'-azido-2',3'-dideoxy-5-thiocyanatouridine;
 9-(3'-azido-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 5 3'-azido-2',3'-dideoxycytidine;
 3'-azido-2',3'-dideoxyguanosine;
 3'-azido-2',3'-dideoxy-N4-5-dimethylcytidine;
 3'-azido-2',3'-dideoxy-N4-OH-5-methylcytidine;
 4'-azido-3'-deoxythymidine;
 10 4'-azido-5-chloro-2'-deoxyuridine;
 4'-azido-2'-deoxyadenosine;
 4'-azido-2'-deoxycytidine;
 4'-azido-2'-deoxyguanosine;
 4'-azido-2'-deoxyinosine;
 15 4'-azido-2'-deoxyuridine;
 1-(4-azido-2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4-dioxypyrimidine;
 4'-cyanothymidine;
 5-fluoro-2',3'-dideoxycytidine;
 3'-azido-3'-deoxythymidine-5'-(butylmethoxyvalinyl)phosphate;
 20 6-chloro-9-(2,3-dideoxy-.beta.-D-glyceropentofuranosyl)-9H-purine;
 2',3'-dideoxy-3'-fluoro-5-chlorouridine;
 butanedioic acid, compd. with (1S-cis)-4-[2-amino-6-(cyclopropylamino)-9H-purine-9-yl]-2-cyclopentene-1-methanol (1:1);
 5'-alkylglycoside carbonate of 3'-azido-3'-deoxythymidine;
 25 3'-azido-2',3'-dideoxy-5-bromouridine;
 3'-azido-5-chloro-2',3'-dideoxyuridine;
 3'-azido-2',3'-dideoxy-5-ethyluridine;
 3'-azido-2',3'-dideoxy-5-fluorouridine;
 3'-azido-2',3'-dideoxy-5-iodouridine;
 30 2,5'-anhydro-3'-azido-3'-deoxythymidine;
 1-(2,3-dideoxy-3-azido-a-L-threo-pentofuranosyl)thymine;
 5'-[(1,4-dihydro-1-methyl-3-pyridinylcarbonyl)oxy]-3'-azido-2',3'-deoxythymidine;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid, 2-cyanoethyl ester;
 3-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid;

- 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'inosinic acid;
 O,O'-bis(3'-azido-3'-deoxythymidin-5'-yl)methylphosphonate;
 2,5'-anhydro-3'-azido-2',3'-dideoxyuridine;
 2,4(1H,3H)-pyrimidinedione,5-(3-azido-2,3-dideoxy-.beta.-D-erythro-
 5 pentofuranosyl);
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-
 methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 (+)-9-[(1.beta.-2.alpha.-3.beta.)-2,3-bis(hydroxymethyl)-1-cyclobutyl]adenine;
 9-[1.beta.-2.alpha.-3.beta.]-2,3-bis(hydroxymethyl)-1-cyclobutyl]guanine;
 10 9-(2,3-dideoxy-.beta.-D-ribofuranosyl)-6-(methylthio)purine;
 2,3-dideoxydidehydroadenosine;
 3'-azido-3'-deoxythymidine;
 2',3'-dideoxydidehydrocytidine;
 2,6-diaminopurine-2',3'-dideoxydidehydroriboside;
 15 b-D-2',3'-didehydro-2',3'-dideoxy-5-fluorocytidine;
 2',3'-didehydro-2',3'-dideoxyguanosine;
 2',3'-dideoxyadenosine;
 2',3'-dideoxyguanosine;
 3'-deoxythymidine;
 20 2',3'-dideoxyinosine;
 6-dimethylaminopurine-2',3'-dideoxyriboside;
 (-)-2'-deoxy-3'-oxa-4'-thiocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thiocytidine;
 (-)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 25 (+)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (-)-(2R,4R)-9-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]guanine;
 (+)-(2S,4R)-1-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-5-fluorocytosine;
 2',3'-dideoxy-3'-fluoro-5-bromouridine;
 3'-fluoro-2',3'-dideoxy-5-iodouridine;
 30 3'-fluoro-3'-deoxythymidine;
 (-)-(2R,5S)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 (+)-(2R,5R)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyadenosine;
 2',3'-dideoxy-2',3'-didehydro-.beta.-L-5-5-fluorocytidine;

- .beta.-L-2',3'-didehydro-2',3'-dideoxyinosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyguanosine;
 2(1H)-pyrimidinone, 4-amino-5-fluoro-1-[(2S,5R)-tetrahydro-5-(hydroxymethyl)-2-furanyl];
- 5 cis-1-[2'-hydroxymethyl-5'-(1,3-oxathiolanyl)]cytosine;
 9-(2"-fluoro-2',3'-dideoxy-B-D-threopentafuranosyl)adenine;
 5-methyl-3'-azido-2',3'-dideoxyisocytidine;
 N-ethyl-2',3'-dideoxyadenosine;
 6-methyl-2',3'-dideoxyadenosine;
- 10 1-.beta.-D-ribofuranosyl-1,2,4-triazolo-3-carboxamide;
 1-(2',3'-dideoxy-2'-fluoro-.beta.-D-threo-pentofuranosyl)cytosine;
 thymidine, 2',3'-didehydro-,3'-deoxy;
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
- 15 3'-azido-2',3'-dideoxyuridine;
 2',3'-dideoxycytidine;
 9-[(R)-2-
 [[bis[[[(isopropoxycarbonyl)oxy]methoxy]phosphinyl]methoxy]propyl]adenine;
 or a prodrug thereof.
- 20
103. The method of claim 99 wherein the viral assembly inhibitor is selected from the group consisting of a protease inhibitor, a viral packaging inhibitor, a glycosylation inhibitor, and a viral RNA processing inhibitor.
- 25 104. The method of claim 103 wherein the protease inhibitor is selected from the group consisting of:
- (-)-cis-2-amino-1,9-dihydro-9-[4-hydroxymethyl)-2-cyclopenten-1-yl)-6H-purin-6-one;
 2,6-diamino-2',3'-dideoxypurine-9-ribofuranoside;
- 30 9-(2-azido-2,3-dideoxy-b-D-erythro-pentofuranosyl)adenine;
 1-(2'-fluoro-2',3'-dideoxy-B-D-erythro-pentofuranosyl)thymine;
 9-(2-azido-2,3-dideoxy-b-D-threo-pentofuranosyl)adenine;
 3-(3-oxo-1-propenyl)-3'-azido-3'-deoxythymidine;
 3-azido-2',3'-dideoxy-5-chlorocytidine;

- 3'-azido-3'-deoxy-6-azathymidine;
 2',3'-dideoxy-3'-fluoro-4-thiothymidine;
 2',3'-dideoxy-3'-fluoro-5-chlorocytidine;
 9-(3'-fluoro-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 5 3'-fluoro-2',3'-dideoxycytidine;
 2,6-diaminopurine-3'-fluoro-2',3'-dideoxyribose;
 3'-fluoro-2',3'-dideoxyguanosine;
 3'-fluoro-2',3'-dideoxyuridine;
 1-[2',3'-dideoxy-3'-C-(hydroxymethyl)-.beta.-D-erythro-pentofuranosyl]cytosine;
 10 3'-azido-2',3'-dideoxy-5-trifluoromethyluridine;
 3'-azido-2',3'-dideoxy-5-[(cyanomethyl)oxy]uridine;
 3'-azido-2',3'-dideoxy-5-fluorocytidine;
 3'-azido-2',3'-dideoxy-5-methylcytidine;
 3'-azido-2',3'-dideoxy-5-aminouridine;
 15 3'-azido-2',3'-dideoxy-5-methylaminouridine;
 3'-azido-2',3'-dideoxy-5-dimethylaminouridine;
 3'-azido-2',3'-dideoxy-5-hydroxyuridine;
 3'-azido-2',3'-dideoxy-5-thiocyanatouridine;
 9-(3'-azido-2',3'-dideoxy-B-D-erythropentafuranosyl)adenine;
 20 3'-azido-2',3'-dideoxycytidine;
 3'-azido-2',3'-dideoxyguanosine;
 3'-azido-2',3'-dideoxy-N4-5-dimethylcytidine;
 3'-azido-2',3'-dideoxy-N4-OH-5-methylcytidine;
 4'-azido-3'-deoxythymidine;
 25 4'-azido-5-chloro-2'-deoxyuridine;
 4'-azido-2'-deoxyadenosine;
 4'-azido-2'-deoxycytidine;
 4'-azido-2'-deoxyguanosine;
 4'-azido-2'-deoxyinosine;
 30 4'-azido-2'-deoxyuridine;
 1-(4-azido-2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4-dioxypyrimidine;
 4'-cyanothymidine;
 5-fluoro-2',3'-dideoxycytidine;
 3'-azido-3'-deoxythymidine-5'-(butylmethoxyvalinyl)phosphate;

- 6-chloro-9-(2,3-dideoxy-.beta.-D-glyceropentofuranosyl)-9H-purine;
 2',3'-dideoxy-3'-fluoro-5-chlorouridine;
 butanedioic acid, compd. with (1S-cis)-4-[2-amino-6-(cyclopropylamino)-9H-purine-9-yl]-2-cyclopentene-1-methanol (1:1);
- 5 5'-alkylglycoside carbonate of 3'-azido-3'-deoxythymidine;
 3'-azido-2',3'-dideoxy-5-bromouridine;
 3'-azido-5-chloro-2',3'-dideoxyuridine;
 3'-azido-2',3'-dideoxy-5-ethyluridine;
 3'-azido-2',3'-dideoxy-5-fluorouridine;
- 10 3'-azido-2',3'-dideoxy-5-iodouridine;
 2,5'-anhydro-3'-azido-3'-deoxythymidine;
 1-(2,3-dideoxy-3'-azido-a-L-threo-pentofuranosyl)thymine;
 5'-[(1,4-dihydro-1-methyl-3-pyridinylcarbonyl)oxy]-3'-azido-2',3'-deoxythymidine;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid, 2-cyanoethyl ester;
- 15 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-adenylic acid;
 3'-azido-3'-deoxythymidyl-(5',5')-2',3'-dideoxy-5'-inosinic acid;
 O,O'-bis(3'-azido-3'-deoxythymidin-5'-yl)methylphosphonate;
 2,5'-anhydro-3'-azido-2',3'-dideoxyuridine;
 2,4(1H,3H)-pyrimidinedione,5-(3'-azido-2,3-dideoxy-.beta.-D-erythro-
- 20 pentofuranosyl);
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
 (+)-9-[(1.beta.-2.alpha.-3.beta.)-2,3-bis(hydroxymethyl)-1-cyclobutyl]adenine;
 9-[1.beta.-2.alpha.-3.beta.]-2,3-bis(hydroxymethyl)-1-cyclobutyl]guanine;
- 25 9-(2,3-dideoxy-.beta.-D-ribofuranosyl)-6-(methylthio)purine;
 2,3-dideoxydidehydroadenosine;
 3'-azido-3'-deoxythymidine;
 2',3'-dideoxydidehydrocytidine;
 2,6-diaminopurine-2',3'-dideoxydidehydroboside;
- 30 b-D-2',3'-didehydro-2',3'-dideoxy-5-fluorocytidine;
 2',3'-didehydro-2',3'-dideoxyguanosine;
 2',3'-dideoxyadenosine;
 2',3'-dideoxyguanosine;
 3'-deoxythymidine;

- 2',3'-dideoxyinosine;
 6-dimethylaminopurine-2',3'-dideoxyriboside;
 (-)-2'-deoxy-3'-oxa-4'-thiocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thiocytidine;
- 5 (-)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (+)-2'-deoxy-3'-oxa-4'-thio-5-fluorocytidine;
 (-)-(2R,4R)-9-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]guanine;
 (+)-(2S,4R)-1-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-5-fluorocytosine;
 2',3'-dideoxy-3'-fluoro-5-bromouridine;
- 10 3'-fluoro-2',3'-dideoxy-5-iodouridine;
 3'-fluoro-3'-deoxythymidine;
 (-)-(2R,5S)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 (+)-(2R,5R)-5-fluoro-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyadenosine;
- 15 2',3'-dideoxy-2',3'-didehydro-.beta.-L-5-5-fluorocytidine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyinosine;
 .beta.-L-2',3'-didehydro-2',3'-dideoxyguanosine;
 2(1H)-pyrimidinone, 4-amino-5-fluoro-1-[(2S,5R)-tetrahydro-5-(hydroxymethyl)-2-furanyl];
- 20 cis-1-[2'-hydroxymethyl-5'-(1,3-oxathiolanyl)]cytosine;
 9-(2"-fluoro-2',3'-dideoxy-B-D-threopentafuranosyl)adenine;
 5-methyl-3'-azido-2'3'-dideoxyisocytidine;
 N-ethyl-2',3'-dideoxyadenosine;
 6-methyl-2',3'-dideoxyadenosine;
- 25 1-.beta.-D-ribofuranosyl-1,2,4-triazolo-3-carboxamide;
 1-(2',3'-dideoxy-2'-fluoro-.beta.-D-threo-pentofuranosyl)cytosine;
 thymidine, 2',3'-didehydro-,3'-deoxy;
 (1S,4R)-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol & .beta.-L-(-)-2',3'-dideoxy-3'-thiacytidine & 3'-azido-3'-deoxythymidine;
- 30 3'-azido-2',3'-dideoxyuridine;
 2',3'-dideoxycytidine;
 9-[(R)-2-
 [[bis[[[(isopropoxycarbonyl)oxy]methoxy]phosphinyl]methoxy]propyl]adenine;
 or a prodrug thereof.

105. The method of claim 99 wherein the viral cellular entry inhibitor is selected from the group consisting of a virion receptor binding antagonist, a virion co-receptor binding antagonist, a viral fusion inhibitor, and a viral uncoating inhibitor.

5

106. The method of claim 105 wherein the receptor binding antagonist or co-receptor binding antagonist is a CD4 receptor antagonist.

107. The method of claim 99 wherein the human immune enhancing agent
10 is selected from the group consisting of an antimetabolite, an antineoplastic agent, an immune modulator, a cytokine, a therapeutic vaccine or antibody, an antioxidant, a hormone, and a vitamin.

108. The method of claim 99 wherein the integrase inhibitor is selected
15 from the group consisting of:
4-((3,4-dimethoxyphenyl)methyl) dihydro-3-((4-hydroxy-3-methoxyphenyl)methyl)-
,(3R-trans)-2(3H)-furanone;
3,5-dicaffeoylquinic acid;
1-methoxyaxalyl-3,5-dicaffeoylquinic acid;
20 9-[(4,6-O-ethylidene-.beta.-D-glucopyranosyl)oxy]-5,8,8a,9-tetrahydro-5-(4-hydroxy-
3,5-dimethoxyphenyl)furo[3',4':6,7]naphtho[2,3-d]1,3-dioxol-6-(5aH)-one;
Hydroxocobalamin;
[S-(R*,R*)]-2,3-bis[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propenyl]oxy]butanedioic
acid.

25

109. The method of claim 96 wherein the anti-human immunodeficiency virus agent is selected from a natural product.

110. The method of claim 109 wherein the natural product is selected from
30 the group consisting of:
(R)-3,6-diamino-N-(aminomethyl)hexanamide;
3-hydroxylup-20(29)-en-28-oic acid, (3.beta.);
3-O-(3',3'-dimethylsuccinyl)-betulinic acid;
Conocurvone;

- Cyanovirin-N;
 3.beta.-hydroxyandrost-5-en-17-one;
 16-.alpha.-bromo-3-.beta.-hydroxyandrost-5-en-17-one;
 9-(guanidino)-N-[10-(guanidino)-1-(3-aminopropyl)-2-hydroxydecyl]nonanamide;
 5 6-acetyloxy-7-(acetyloxymethyl)-5-hydroxy-3,11,11,14-tetramethyl-15-oxotetracyclo[7.5.1.0<1,5>.0<10,12>]pentadeca-2,7-dien-4-yl] acetate;
 13-hydroxyingenol-3-(2,3-dimethylbutanoate)-13-dodecanoate;
 1,2-dithiolane-3-pentanoic acid;
 2,4,6,8,10,14-octadecahexaenamide,13-hydroxy-N-[(1S)-2-hydroxy-1-methylethyl]-
 10 2,10,12,14,16-pentamethyl-18-phenyl-, (2E,4E,6Z,8E,10E,12R,13R,14E,16S);
 4H-pyran-4-one,3-ethyl-6-methoxy-5-methyl-2-(2-(3-methyl-4-phenyl-3-butenyl)-4-o-xazolyl)-,(E);
 12-deoxyphorbol-13-(3E,5E-decadienoate);
 3-hydroxy-20-oxonorlupan-28-oic acid, (3.beta.);
 15 12-deoxyphorbol-13-acetate;
 4-oxazolecarboxamide,2-[4,4',4'',5,5',5''-hexahydro-4,4',4''-trimethyl-2''-(2-phenylethenyl)[2,4':2',4''-terthiazol]-4-yl]-N,5-dimethyl-,[4R-[2[2[2''(E),4''S*],4'S*],4R*]];
 Acemannan;
 20 5,6,7-trihydroxyflavone-7-O-b-D-glucopyranosideuronic acid;
 Calanolide A;
 Calanolide B;
 (1S,6S,7R,8R,8aR)-1,6,7,8-tetrahydroxyindolizidine;
 1,5-Dideoxy-1,5-imino-D-glucitol;
 25 3,5-dicaffeoylquinic acid;
 1-methoxyaxalyl-3,5-dicaffeoylquinic acid;
 hypericin;
 inophyllum B;
 inophyllum P;
 30 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol];
 5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)bis[1,2,3,4,-tetrahydro-1,3-dimethyl-6,8-isoquinolinediol]; and

5,5'-(1,1'-dihydroxy-8,8'-dimethoxy-6,6'-dimethyl[2,2'-binaphthalene]-4,4'-diyl)[3,4,-
dihydro-8-methoxy-1,3-dimethyl-6-isoquinolinediol],[1,2,3,4-tetrahydro-1,3-
dimethyl-6,8-isoquinolinediol].

5 111. The method of claim 97 wherein the anti-human immunodeficiency
virus agent substantially inhibits viral replication, colonization, or assembly in the
human.

10 112. The method of claim 98 wherein the anti-human immunodeficiency
virus agent substantially inhibits mitosis in cells of the human.

 113. The method of claim 98 wherein the anti-human immunodeficiency
virus agent substantially increases the immune response of the human.

15 114. The method of claim 98 wherein the anti-human immunodeficiency
virus agent substantially reduces cellular replication in the human.

 115. The method of claim 96 wherein the anti-human immunodeficiency
virus agent is a virucidal agent.

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 116. The method of claim 115 wherein the virucidal agent is selected from
the group consisting of cidofovir, formaldehyde, and glutaral or a prodrug thereof.

 117. The method of claim 115 wherein the virucidal agent is a T-cell
25 proliferation inhibitor.

 118. The method of claim 60 wherein the HIV infection causes acquired
immunodeficiency syndrome.

30 119. The method of claim 60 wherein the human immunodeficiency viral
infection causes a reduction in the number of T-cells present in the human.

 120. The method of claim 119 wherein the T-cells are CD4+ T-cells.

121. The method of claim 120 wherein the T-cells are helper T-cells.

122. The method of claim 96 wherein the anti-human immunodeficiency virus agent substantially reduces cellular replication in the human.

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123. The method of claim 96 wherein the human immunodeficiency viral infection results in the formation of an acquired immunodeficiency syndrome related disorder in the human.

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124. The method of claim 123 wherein the acquired immunodeficiency syndrome related disorder is selected from the group consisting of skin rash, fever, muscle and joint aches, swelling of the lymph glands, seizures, hepatitis, diarrhea, shingles, herpes simplex infection, thrush, Kaposi's sarcoma, pneumocystis carinii pneumonia, cryptococcal meningitis, toxoplasmosis, mycobacterium avium complex, cytomegalovirus infection, and lymphoma.

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125. The method of claim 96 wherein the anti-human immunodeficiency virus agent is administered orally.

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126. The method of claim 96 wherein the anti-human immunodeficiency virus agent is administered intravenously.

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127. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor is administered during a continuous period prior to administration of the anti-human immunodeficiency virus agent.

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128. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor is administered during a continuous period after the administration of the anti-human immunodeficiency virus agent.

129. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor is administered during a continuous period simultaneous with administration of the anti-human immunodeficiency virus agent.

130. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor and the anti-human immunodeficiency virus agent are administered sequentially.

5 131. The method of claim 60 wherein the cyclooxygenase-2 selective inhibitor and the anti-human immunodeficiency virus agent are administered substantially simultaneously.

10 132. The method of claim 123 further comprising administering an agent to the human wherein the agent treats or prevents the acquired immunodeficiency syndrome related disorder.

15 133. The method of claim 132 wherein the agent is ibuprofen when the acquired immunodeficiency syndrome related disorder is fever.

 134. The method of claim 132 wherein the agent is an anti-neoplastic agent when the acquired immunodeficiency syndrome related disorder is cancer.

20 135. The method of claim 132 wherein the agent is an antifungal agent when the acquired immunodeficiency syndrome related disorder is meningitis.

 136. The method of claim 132 wherein the agent is an antibiotic agent when the acquired immunodeficiency syndrome related disorder is pneumocystis carinii pneumonia.

25 137. The method of claim 132 wherein the agent is an antiprotozoal agent when the acquired immunodeficiency syndrome related disorder is toxoplasmosis.

30 138. The method of claim 132 wherein the agent is an antiviral agent when the acquired immunodeficiency syndrome related disorder is cytomegalovirus.

 139. The composition of claim 40 wherein the viral cellular entry inhibitor is enfuvirtide.

140. The composition of claim 40 wherein the viral cellular entry inhibitor is hydroxyurea.

5 141. The method of claim 96 wherein the anti-human immunodeficiency virus agent is enfuvirtide.

142. The method of claim 96 wherein the anti-human immunodeficiency virus agent is hydroxyurea.